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ORIGINAL LECTURES.

METHODS OF RESORPTION AND DISPOSAL OF FOREIGN BODIES IN THE LIVING SYSTEM.[1]

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Materials to be reabsorbed are chiefly the products of inflammation, such as exudates and necrosed tissue. These constitute foreign bodies, or are unnatural in the place in which they are found. They are therefore disposed of as are all foreign bodies, by an attempt on the part of the system to rid itself of their presence.

Substances capable of resorption differ in their nature, and may be grouped in three categories: first, liquids; second, soluble solids; and third, insoluble solids. By soluble solids I mean those that can be dissolved in the normal juices of the tissues, the lymph or blood.

Liquids are readily removed, unless they exist in overwhelming amounts, by the lymphatics. The liquid mingles with and practically becomes part of the lymph, and therefore is disposed of with it. The foreign liquid becomes more and more diluted by admixture with fresh lymph the further it passes from its original seat, until it becomes evenly distributed as a part of the whole blood and interstitial liquid of the body. If an irritant, it loses its effect in proportion as it is diluted. This dilution too takes place more rapidly when the foreign liquid is irritant, as inflammation is excited, and with it a more or less copious serous exudate. Thus the irritant effects are confined and weakened, so that the noxious material may be eliminated. The irritant may, however, exist in such quantities that the system is unable to remove it.

Exudates which are to be reabsorbed are not thus irritating, but are capable of being removed unless they are so great, as they are in some dropsies, that they mechanically prevent or obstruct the lymphatic circulation. The latter is dependent upon the action of the voluntary muscles, which by their contraction, as it were, squeeze the lymph out of and through them. The muscles, when surrounded by an excess of fluid, are able to act very imperfectly, if at all. Another factor that maintains the lymphatic circulation is the aspirating property of the thoracic cavity upon the great vessels within it. But in œdema, when exudates exist in excess in the tissues, the respiratory acts are almost always impeded and imperfect. A third factor which contributes to render resorption impossible under these circumstances is the condition of the blood-vascular system, which is usually such that it rather tends to increase the exudate instead of contributing to maintain lymphatic circulation.

Foreign bodies which are soluble in the interstitial fluids are rapidly surrounded and bathed by an unusual quantity of them. It seems to be a law of the animal economy to attempt at once the removal of all unnatural bodies, or at least a disposal of them so that they will not irritate the surrounding parts. The first step in the disposal of them is uniformly the production of a copious serous exudate. This enables a soluble body to be dissolved and removed in liquid form, through the lymph channels. Bodies which are thus soluble are to a greater or less extent irritating. They are always sufficiently so to excite a copious exudation of serum from the blood, and may be sufficiently so to cause violent inflammation.

Of the bodies that are insoluble in the interstitial fluids we recognize two kinds: those that are perfectly insoluble, and those that are capable of being liquefied in the living tissues. They are also more or less irritating. Consequently they too excite changes which tend to their removal or to render them inert. In order to comprehend the methods by which they are disposed of, let us examine two or three illustrative cases. If a solid, insoluble, smooth and compact body like a ball of glass be inserted into the tissues, an inflammation is lighted up around it. Exudation of both serum and leucocytes takes place from the neighboring vessels. As the serum is unable to dissolve the glass, it is gradually reabsorbed. The leucocytes, however, attach themselves to the surface and form a complete shield or covering. By their own multiplication and by additions from the blood, a more or less thick layer of these cells surrounds the foreign body and separates it from the surrounding tissue. Under these circumstances they develop first into granulation tissue, and subsequently into cicatricial or fibrous tissue, which ultimately forms a complete envelope about the ball, and thus renders inert the irritating power of the foreign body. The abnormal substance is now *encapsuled*. This process constitutes the first step by which insoluble substances are disposed of.

If the foreign body be a granular mass, as, for example, small pieces of charcoal, a lump of pigment granules, or numerous fine pieces of stone, the method

[1] Abstract of a Lecture delivered before the class in Pathology at the Chicago Medical College, in November, 1884.

is very different. The first steps in the process are the same, but the subsequent ones differ much. First, as before, a serous exudate is provoked, which contains many or few leucocytes. These latter, as in the former case, at once attack the granular mass. Instead, however, of developing on its surface into granulations and ultimately fibrous tissue, they seize upon each granule, and by their amœboid movements surround and inclose the granules within the protoplasm of their own substance. When this is done, the leucocytes are slowly washed away from the foreign body into the lymph stream and are carried along in its course. The granules are thus one by one transported away, and more or less scattered through the body, and perhaps ultimately eliminated from it. That the leucocytes have this power is well known, for not infrequently they can be seen in microscopic specimens to contain fragments of pigment. Thus tattoo marks are sometimes partially destroyed, the pigment being removed from its original seat and deposited in a neighboring lymphatic gland. Thus, also, the pigment particles which we inhale are carried to and deposited in the bronchial lymphatic glands. Experimentally, too, it has been shown that these corpuscles have the power of taking up and transporting granular matter. If to white corpuscles that are under examination on the warm-stage of a microscope a little very finely precipitated carmine is added, the most active corpuscles will at once be seen to first adhere to the particle of coloring matter, and then by degrees to change its position so that the pigment is within the corpuscle; in other words, the living protoplasm apparently flows around the carmine particle. The corpuscle has also the power to disengorge its load and to leave it. On this account, often, particles of foreign substances may be transported in the living body through many stages by different corpuscles.

When the leucocytes gather around such a foreign mass, they are not content to attack the exterior only, but press into every crevice and penetrate the interior through its interstices. Thus these masses often become honeycombed. If the material be of considerable size, and in portions quite compact, after partial removal has occurred by this process, a slow encapsuling may occur which will cut short or interfere with further attempts at removal.

A third variety of substances insoluble in the interstitial liquids comprises such as are liquefied under the influence of the living body. As a type of these we may take coagulated albumen, which is insoluble in blood or lymph. How this liquefaction is accomplished is not absolutely known. Many writers leave the question "how?" unanswered, and even unasked; contenting themselves with the statement of the fact of liquefaction. Others mention the fact without special discussion, but in such connection that we might think that they believed the removal of the foreign body occurred not by liquefaction, but by the transportation of its particles little by little by the leucocytes, as has just been described for insoluble granular matter. By others it has been suggested that liquefaction was due to the presence of some unorganized ferment in the tissues or interstitial liquid. We must admit the possibility of such a ferment being present, though none has yet been isolated or experimentally proved. Unorganized ferments usually act readily when separated from the living body. But liquefaction of albumen will not take place in the tissues if they are not alive, nor in lymph nor blood when these are removed from the living body. The element of life in the surrounding substances we are led to believe plays an important part in the process of liquefaction.

If we reject the theory of the presence of an unorganized ferment, we must naturally look for another explanation. We have seen that the white corpuscle plays an active part in the resorption of granular bodies, and I would ask, May it not also be the active agent of liquefaction, acting, however, in a very different manner from a transporting or carrying agent? In order that unicellular animals may support life, they have the power of assimilating food with which they come in contact. For example, the amœba swallows, or rather encloses, particles of food in its protoplasm, when the little mass apparently melts away, becoming a part of the homogeneous substance of the animal. The lowest plants act in almost the same way. They, however, absorb the substances on which or within which they are planted without first swallowing them as solid particles. Many bacteria are known to cause liquefaction of their solid foods merely by their contact with them. For example, when planted upon culture gelatine, as the bacteria grow, they become surrounded by liquid, which is contained in hollows in the gelatine made by its own liquefaction.

We have already seen that the leucocyte or white corpuscle possesses the property of taking up and transporting granular matter as may an amœba. In other respects, also, it bears a close resemblance to these monads. It has the power of locomotion, of projecting prolongations of its protoplasm, of retracting them, of throwing out others from another side; in other words, at times will show as well developed pseudopodia as the amœba.

Is it not, then, probable that it has other homologous properties? It must be nourished, as well as all other portions of the living body. We ordinarily suppose that this nourishment exists ready for assimilation in the blood and lymph. However, as in other respects it bears so strong a resemblance to unicellular animals, it seems at least quite probable that it may have the power of liquefying or causing solid particles to slowly melt away as they do when they are appropriate food for and when they are being taken up by the amœba. Nor is it necessary to suppose that solid materials which can thus be liquefied must first be taken up as granules within the mass of the leucocytes, for the latter may be able to act as do some of the bacteria, simply by contact with the liquefiable substance. The facts that life is necessary to the process of liquefaction and that the leucocytes exist during the process about the liquefying body in undue numbers would make it possible to suppose that these leucocytes were the vital agent which produced the dissolution of the insoluble mass. Liquefaction would thus be due to the assimilative and metabolic changes

of the leucocytes. It would be a process of digestion on the part of the leucocyte. The liquefied body having been utilized as food by the white blood-cell, which would play the part of an organized ferment.

This explanation of liquefaction I have not yet seen given elsewhere, but arguing, as students of nature must constantly do, from analogy, it seems most plausible and most probable. If true, however, the word liquefaction may not be altogether appropriate, the process not being necessarily one by which substances are liquefied, but rather one by which they are assimilated. We may therefore say that certain insoluble foreign bodies are removed by assimilation. This process is of common occurrence in the animal body. By its help it is that dead tissues are separated from living, that sloughs are formed upon free surfaces, that animal ligatures disappear when imbedded in the tissues, and that solid inflammatory products are removed.

A line of demarcation around a sloughing surface is a line of inflammation. The latter process causes, by the necessary exudation, a separation of the cells from one another, and their death and final liquefaction. Thus a severance of continuity occurs between the living and dead tissue. In the case of ligatures, the ordinary process of absorption takes place. Enough irritation occurs to cause at least a slight exudation of serum and a more abundant migration of leucocytes around the ligature. Then follows liquefaction and disintegration. Deep-seated inflammation often occurs, accompanied by destruction, necrosis of tissue, which finally disappears without discharging on a free surface. The necrosed cells are broken up, liquefied, and absorbed or assimilated.

Not unfrequently foreign bodies are observable which, though insoluble in the interstitial liquids, cannot be grouped under either of the three varieties just described. They may present in part the characters of each, and therefore we find them often honeycombed by the disintegrating, liquefying and transporting agency of lymph and cells, and also later on encapsuled. All the methods of resorption may have been active, and finally the mass made non-irritating by encapsulement.

These are, in brief and in general terms, the changes effected and methods employed by nature in removing and rendering inert foreign bodies.

Since the above lecture was given, I have found in the *Revue des Sciences Médicales*, for January, 1885, abstracts of two articles by Metschnikoff, which were originally published in *Rouskia Medicina*, in 1884, in which views similar to those stated above are advanced in regard to the power of white corpuscles to, by "intracellular digestion," cause certain substances to disappear. As arguments in favor of this view, Metschnikoff cites the changes observable in the tail of the tadpole while it is atrophying or being absorbed. From the beginning of the process a collection of amœboid cells is observable, which contain entire particles of nerve fibres and primitive muscle fibres. The cells gather about the caudal muscle, surround little by little the primitive muscle fibres, and finally devour them. Similar changes are observable also during the metamorphosis of echinoderms and other invertebrates. In these latter the mesodermic cells play the part that in vertebrates is taken by the white blood-cells.

Metschnikoff also extends the theory, and because in certain septic diseases he finds bacteria in the white corpuscles, believes that the latter are the agents which nature has provided for the removal of these as well as other foreign and noxious substances from the body.

ORIGINAL ARTICLES.

PRACTICAL REMARKS AND SUGGESTIONS IN REGARD TO DISEASES OF THE EAR, THROAT AND NOSE.[1]

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The frequency of aural, throat and nasal affections, the necessity of early attention to them to prevent lamentable consequences, and the prevalence of certain errors in regard to them, were the excuses for this paper. In reference to aural trouble, for example, there is not sufficient importance attached to their relation to general medicine; and when ear symptoms develop during the course of some constitutional trouble, such as struma, syphilis, gout, tuberculosis, the exanthemata and zymotic diseases, and during dentition, these symptoms are frequently ignored, as requiring no special treatment; and if the patient call the attention of the physician to them he is often told that with the restoration of the general health the symptoms will disappear. The reader doubted, in view of the frequency with which these cases come into the hands of the specialist, if this advice be warranted by clinical experience.

The dependence of the ear upon the throat, and the very frequent occurrence of acute or chronic ear trouble with impaired hearing resulting from nasal or throat disease, is now a recognized fact; but at the same time the error of supposing that the cure of the *cause* will remove the *effect* is too common. Such mistaken advice misleads the patient, who is actively treating the nose or throat trouble, into a sense of security which nearly always ends in disappointment. There is no class of cases which more requires early and active local treatment, or in which delay, from procrastination or improper advice, is so disastrous in results as in diseases of the ear, whether from constitutional or local causes, or propagated from the throat. This is particularly the case when children are the patients, it being so often said that they will *grow out* of the trouble.

He then referred more particularly to the disastrous consequences of neglecting middle ear catarrh, whether suppurative or not, in its earlier stages. In suppurative inflammation neglect may be fatal both to hearing and to life, from whatever cause it may result. Sometimes this trouble commences with great pain; or, again, the discharge from the ear may be

[1]Read before the Medical Society of Virginia, Sept. 17, 1885.

the first intimation of the trouble. *Pain* should be combatted by local leeching, warm applications (hot water, warm cloths, but no poultices), a twenty per cent. solution of cocaine,[1] with sulphate of atropia locally, and anodynes internally. In this exudative stage, the muriate of pilocarpine[2] and sulphide of calcium should be administered. If, in spite of this treatment, pain persist, and examination of the membrana tympana shows it to be bulging, an incision should be made into its posterior inferior quadrant, so as to evacuate the contents of the tympanum with the air-bag. When the discharge has once begun, whether with or without acute symptoms, the ear should be kept clean with a carbolized or borated solution of bicarbonate of soda, and by the daily use of Politzer's air-bag to keep the Eustachian tube free. Should the pain still persist the cocaine solution, without any atropia (which would be dangerous after the perforation of the drum-head), should be continued. The drum may also be dusted with pulverized boracic acid once or twice daily. Such treatment is within the reach of every physician, and if neglected the results will be unfortunate in the large majority of cases, as mastoid disease, meningitis, embolism, thrombosis, cerebral abscess, pyæmia, etc., may result. Where one case recovers without treatment a dozen lose their hearing by gradual destruction or distortion of the ear structures; and the younger the case the more lamentable the consequences. In nearly every case of suppurative inflammation of the middle ear, the membrane limitans of the mastoid cells and mastoid antrum undergoes more or less pathological alteration. Threatening mastoid complication can be frequently averted or aborted by leeching and by the administration of sulphide of calcium. If there be pain or pressure, or redness over the process, a free incision to the bone should be made; and should pain still persist the bone should be opened.

In scarlet fever, a most fruitful cause of suppurative ear disease, we sometimes see cases in which hearing is totally lost. This is especially so in those cases in which the throat trouble is worst, sometimes with the formation of diphtheritic membrane—the so-called scarlatinal diphtheria. In some cases the destructive tendency of the inflammation involves the membranes of the labyrinthine windows, thus emptying the labyrinth of its fluid contents, and destroying the nerve filaments, resulting in absolute and permanent deafness. In other cases the labyrinth seems to participate in the exudative tendency, and nerve-perception is temporarily obliterated, gradually returning as the exudation is absorbed.

In the same relation of ear diseases to general medicine, the reader called attention to the influence of menstruation, both at puberty and at the menopause, upon such troubles. At the climacteric period it is very common to find impaired hearing coming on, usually in the form of adhesive middle-ear catarrh. The reader has seen cases of otorrhœa coming on at puberty with each menstrual period, yield readily to treatment, and return with each menstrual period, with a bloody purulent discharge.

In using the aural syringe for removal of impacted wax, Dr. White advocates only a gentle flow of the liquid. He is much opposed to forcible injections, as by them the drum-head may be considerably congested or damaged. For the removal of impacted wax he uses frequent applications of a warm solution of bicarbonate of soda in glycerine and water, until the wax becomes softened and partially dissolved, when it is easily removed by gently syringing. Foreign bodies may be removed by a gentle flow of warm water as easily as by force. In some cases it is necessary to use the ear probe, but this should only be attempted with good illumination with a head mirror.

Dr. White then referred to the prevalence of erroneous impressions regarding some throat and nose troubles, such as confounding follicular tonsillitis with diphtheria. In *tonsillitis* we have fever, sometimes nausea, dysphagia, throat-pain usually beginning on the third day, and exudation in patches on the surface of the swollen tonsil. In *diphtheria*, with the same symptoms, the exudation is not confined to the tonsil, but extends over neighboring parts. Guaiacum seems to be a specific for the follicular tonsillitis, and supports the view that tonsillitis is more common in rheumatic persons. When recurrent attacks are common, or when the tonsil becomes so hypertrophied as to cause defective nasal breathing or impaired articulation, the tonsils should be removed. Anything that interferes with free nasal breathing, and necessitates mouth breathing, should be removed. Many cases of fever in childhood are due to an unlooked-for and unknown tonsillitis. There are also various reflex disturbances which are due to obstruction to nasal respiration, as reflex cough, sick headache, asthma, and hay fever. Treatment of the nasal trouble will sometimes cure these affections, even the hay fever.

[1] In spite of assertions to the contrary, Dr. White has conclusively shown that cocaine anæsthetizes the *membrana tympani*, as shown by the fact that he has performed paracentesis of the apparently healthy drum-head after the application of cocaine, without pain to the patient.

[2] Except in certain cases of heart trouble in which pilocarpine is contra-indicated.

CLIMATIC RELATIONS OF CANCER AND CONSUMPTION.

BY EDMUND ANDREWS, M.D., LL.D.,

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Some years ago, I showed by a comparison of the United States statistics of mortality for the censuses of 1860 and 1870, that cancer had a distinct climatic relation, being most abundant in the same regions as consumption.[1] The law of prevalence for our country appears to be, that both diseases are most abundant on the sea-coast, and diminish as we recede to the interior, and that at equal distances from the sea they are more abundant at the north than at the south.

In preparing the Census Report of 1880, Surgeon J. S. Billings has given great attention to the tabulation of the statistics of mortality in such a form as to show the influence of a variety of conditions upon disease, and prominently among them the effects of

[1] Chicago Med. Exam., p. 178, 1872.

climate. In the Report now being issued, he has subdivided the States into parts, such as seashore regions, mountain regions, great river belts, regions of the northern lakes, etc., and combined these segments into twenty-one "grand groups," showing the mortality of different diseases in each group. This arrangement gives a much superior opportunity to trace climatic effects than the former division by States. Taking the twenty-one "grand groups" in successive order, I have calculated for each the proportion of deaths from cancer and consumption to the total deaths from all causes, showing clearly the relative frequency of these diseases in each section, and placed the results in the following table:

Table showing the proportions of deaths from cancer and from consumption to deaths from all causes in the year 1880.

No. of Grand Group.	Names and Descriptions of Grand Groups.	Proportion of Deaths from Consumption to Deaths from all Causes.	Proportion of Deaths from Cancer to Deaths from all Causes.
1	North Atlantic Region or New England Sea-coast Belt	1 to 6	1 to 36
2	Middle Atlantic Coast Region or Sea-coast Belt from New York to Virginia inclusive	1 " 7	1 " 51
3	South Atlantic Coast Region or Sea-coast Belt from North Carolina to Georgia inclusive	1 " 11	1 " 111
4	Gulf Atlantic Coast Region or Sea-coast Belt from Florida to Texas inclusive	1 " 8	1 " 57
5	North-eastern Hills and Plateaus or Inland Hill Regions of New England and Eastern New York	1 " 5½	1 " 32
6	Central Appalachian Region or Alleghany Mountains from New York to Maryland inclusive	1 " 9	1 " 47
7	Region of the Great Northern Lakes	1 " 9	1 " 49
8	Interior Plateau or the Plateau between the Appalachians and the Atlantic Coast Belt extending from New York to N. Carolina inclusive	1 " 7	1 " 47
9	South Central Apalachian Region or the Mountains from Virginia to Alabama inclusive	1 " 8	1 " 66
10	Ohio River Belt	1 " 7	1 " 58
11	South Interior Plateau or the Inland Level Regions of South Carolina, Georgia, Alabama and Tennessee	1 " 12	1 " 97
12	South Miss. River Belt	1 " 11½	1 " 166
13	North Miss. River Belt	1 " 9½	1 " 52
14	South-west Central Region or those parts of Missouri, Arkansas, Louisiana, and Texas lying north of the Gulf Coast Region and west of the S. Miss. River Belt	1 " 15	1 " 147
15	Central Region of Plains and Prairies or that Belt of Ohio, Indiana, Kentucky, and Tennessee lying next west of the Mountains	1 " 7	1 " 65
16	Prairie Region or parts of Missouri, Iowa, Illinois, Kansas, Nebraska, Wisconsin, Minnesota and Dakota	1 " 10	1 " 73
17	Missouri River Belt (as far as to upper border of Dakota)	1 " 10	1 " 100
18	Western Plains or level portions of Dakota, Montana, Wyoming, Nebraska, Kansas, Colorado, New Mexico, and of N. W. Texas	1 " 14	1 " 265
19	Heavily Timbered Region of the North-west or the Forest portions of Michigan, Wisconsin, and Minnesota	1 " 7½	1 " 42
20	Cordilleran Region or the Great Central Mountain Belt of the West, extending from Canada to Mexico	1 " 13	1 " 112
21	Pacific Coast Region	1 " 7	1 " 42
		1 to 9.23	1 to 76.9

In preparing this table, I have disregarded the minor fractions. Broad principles only can be deduced from it, because the government, in taking the census of mortality, cannot attain minute precision in all details. Examining first the two columns of figures, we see at a glance that cancer and consumption, though presenting minor variations, have in the main the same topographical and climatic distribution; in short, that cancer abounds in the same climates as consumption. In two former articles I showed this fact from the censuses of 1860 and of 1870. The law regulating this distribution may be expressed nearly as follows:

1. Cancer and consumption abound most on the sea-coast belts.

2. At the same distance from the sea, they are abundant at the north, and less so at the south.

For instance, New England, which is far north and skirts the sea, has one death from consumption to about six deaths from all causes and of cancer about one to thirty-six. Going westward to the region around the great lakes, we find consumption one to nine and cancer one to forty-nine. Still further west the prairie region shows consumption one to ten and cancer one to seventy-three. On the same latitude the great western mountains and plains show consumption about one to twelve and cancer one to about 150. Now if we descend to the sea-coast of Oregon and Washington Territory, the ocean influences again prevail, and deaths from consumption rise to one in seven and one-half, and from cancer to one in sixty-six. Everywhere the same result will be found. It is not clear which of all the possible influences of the sea produces these diseases. One can imagine it to be the prevalent dampness, the salt spray in the air, the modifications of temperature, the use of sea food, or the presence of specific bacilli bred by the ocean, or requiring sea air for their ready development. The figures in the Census Report do not enable us to solve this chaos of problems.

The effect of latitude is not as distinct as that of proximity to the sea, yet there is a general diminution of both diseases as we go southward. We find as follows:

	Consumption.	Cancer.
New England Coast	1 to 6	1 to 36
Middle Atlantic Coast	1 to 7	1 to 51
South Atlantic Coast	1 to 11	1 to 111
Florida	1 to 12	1 to 105

In the three successive censuses New Mexico has shown itself preëminent for its exemption from both cancer and consumption. No portion of the United States approaches it in this respect. In the census of 1880, out of 2,436 deaths from all causes, only forty-nine were from consumption and thirteen from cancer, giving the following ratio, viz.:

Consumption	1 to 50
Cancer	1 to 187

Surgeon Billings divides most of the Territory into the eastern or plain portion, and the western, or the mountain part, the latter being traversed by the valley of the Rio Grande, and the former by the Atchison, Topeka and Santa Fé Railway. The eastern or plain part is, according to the figures, superior to the mountain part in exemption from these two diseases, but both are above any other State or Territory in immunity. New Mexico combines the two conditions which in this country secure protection from the diseases under consideration, viz.: remoteness from the sea and southern latitude. The elevation

is from 4,000 to 8,000 feet above the sea. The winters are mild and dry and the rainfall slight, being from ten to fifteen inches a year. The little rain that falls comes mostly in summer showers. On the whole, it would seem well proved that New Mexico is the proper residence for consumptive patients. Colorado has also stood deservedly high in these respects, but the figures in the census have been made to appear less favorable than those of ten years ago, in consequence of the really large number of consumptives who have been taken thither in the advanced stages of the disease.

The question is often asked, "Do cancer and consumption on the whole increase in the community?" The following figures convey the substance of what is known on the subject. They are obtained by averaging the ratio of all the States and Territories for the only three censuses which have recorded any mortality statistics:

Table showing the Proportion of Deaths from Cancer and Consumption to Deaths from all Causes in the whole United States in 1860, 1870 and 1880.

	1860	1870	1880
Ratio of deaths from Cancer to deaths from all causes.....	1 to 142	1 to 101	1 to 77
Ratio of deaths from Consumption to deaths from all causes.....	1 to 11	1 to 9	1 to 9

Apparently cancer has nearly doubled since 1860. Consumption, on the other hand, increased largely to 1870, and since then has remained nearly stationary, showing a slight decrease in 1880. In the New England States consumption shows a very decided diminution. This may be from improved modes of living and from the immigration into the towns of foreigners, not yet brought under the influence of the climate.

Inferences about the increase or diminution of these diseases are subject to possible error, because the tables of mortality do not represent the whole decennial periods, but only the single years 1860, 1870, and 1880. It may be that there are yearly variations of irregular character, which would present a different aspect could we eliminate them by averaging the whole of each ten-year group together. Still, the general tendency of the figures as they now stand is to show an increase of the ratio of these diseases.

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CONSEQUENCES OF ACUTE AURAL TROUBLES IN CHILDREN WHEN NOT PROPERLY ATTENDED TO.[1]

BY T. E. MURRELL, M.D.,

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In examining many persons one is struck with the varying degrees of hearing power in different individuals, and in different ears of the same individual. So much so is this the case that it has been extremely puzzling to fix a standard of hearing power, even though the character of the test be agreed on, which is in itself a difficult problem. But, to meet all peculiarities, we will presume the various methods in common use are tried on each person under test, and a comparative estimate deducted therefrom. In this manner there is found a very great difference even in persons of presumably normal condition—persons who have no catarrhal affection and no history of ear disease. If one selects for his examination persons beyond middle life he will find few whose hearing reaches the highest standard. Causes arising in the course of life from climate, mode of living, habits and vocation, lead to defective hearing, not to mention acute affections incident to exposure, general diseases, and accident.

Omitting all causes arising after childhood, we will only consider acute affections in children as causative of dulness of hearing in after life.

Many persons with impaired hearing who can give no history of their trouble, have likely suffered from some middle ear affection in infancy or early childhood, a period of life in which records of disease are readily lost. In proof of which statement, a careful inspection of the drum-membranes of such persons will often reveal evidences of former trouble. In childhood nearly all diseases are acute primarily, to which affections of special organs are not exceptions. The two diseases of the ear most frequent in infancy and early childhood are acute catarrh and acute suppuration of the middle ear. Not only the mother, but also the physician, is quite liable to overlook an ear-ache in an infant. The cause of its plaint is unsuspected in the search for the more common pains and distresses of this time of life. By reason of, or in spite of, expectant remedies, the sufferer assumes its usual playfulness in a few hours, or days, and all goes well until another such attack comes on at some indefinite future period. These attacks may repeatedly recur—being often of a sub-acute type—before the cause is ascertained. During one of the attacks a careful inspection of the fauces would reveal a redness with, perhaps, œdema; and of the drum-membrane, an injection along the handle of the malleus or a uniform redness. When the attack has passed away no vestiges of it may remain, either in hearing power or appearance of the parts involved. But should they be often repeated the mucous membrane of the pharynx and middle ear gradually assume abnormal conditions; the lymphatics become engorged, the tissues pervaded with formative elements, the arterioles enlarged and capillaries congested, and the functions of the parts altogether disturbed. If the perturbating causes are now removed, there is a tendency to restoration to a healthy condition; but often a vulnerability remains, whereby the slightest exciting cause, as a cold in the head, is sufficient to renew the morbid processes. It is fortunate that all acute and sub-acute catarrhs of the middle ear in infancy and early childhood do not, from neglect, terminate in injury of a permanent character. Enough do, however, to warrant particular stress on the importance of proper attention being given them, notwithstanding the popular idea of their unimportance. The habit should be broken by appropriate treatment, general and local, so as to assure against any unfortunate results.

Acute suppuration is the usual termination of an acute catarrh of the middle ear when of high degree

[1]Read before the State Medical Society of Arkansas, April 22, 1885.

and sudden onset. There is the ear-ache, most intense, perhaps, fever and pharyngitis. A few hours, or a day or two at most, brings relief by escape of the pent-up products of inflammation through the drum-membrane, which yields to the pressure and absorptive action of the matter within the middle ear cavity. The inflammation for a time is generally intense and the pain excruciating, but with rupture of the drum-membrane comes rapid subsidence of the one and almost immediate cessation of the other. Ordinarily the suppurative process comes to an end in a few days or weeks, according to the severity of the attack, the perforation in the drum-membrane heals by a cicatricial formation, and hearing becomes usually pretty fair. Suppose, however, nature has been allowed to take her course; that no treatment, or insufficient treatment, has been adopted, and what is the result? Careful test will show quite marked loss of hearing, which will not only be permanent, but a condition of the mucous membrane of the middle ear will be left which will tend to increase with age, whereby interference with conduction through the middle ear is more and more interfered with, leading to increased dulness of hearing in after life.

One attack of acute suppuration predisposes to another, so that chronic suppuration, with its disabling effects, follows; or cicatricial bands form in the middle ear cavity, with anchylosis of the ossicles, pressure on the labyrinth, and other abnormal conditions, resulting in marked diminution of hearing. An individual in whom the writer has more than ordinary interest, suffers extreme deafness in one ear from anchylosis and cicatricial formations from repeated attacks of acute suppuration in early childhood, and disagreeable impairment of the other from an unhealthy condition of the mucous membrane implanted at the same time. A few words now as to how to avoid such consequences. It is presumable, with the literature within the reach of every practitioner of medicine, that the general principles of treatment of these troubles are understood, and I shall therefore put stress only where importance demands it. In acute and sub-acute aural catarrh, the child's food, clothing and general care should receive special attention. Colds are the starting point, and they should be avoided by the observance of those laws of health familiar to every intelligent physician. The pharyngeal and naso-pharyngeal regions call for suitable remedies. The best immediate treatment for the ear is a douche of warm water run in a continual stream into the outer ear; or syringed, or poured, in want of the ear douche. Cocaine, atropia or morphia may be tried in warm solution; but personal experience leads me to rely more on the free use of pure warm water, both as an anodyne and as a curative agent, than any other topical remedy. After the douche or syringe is used a pledget of cotton should be worn in the outer meatus, both to protect from cold and to retain the heat and moisture. There is usually an accumulation of mucus in the middle ear cavity, together with obstruction of the Eustachian tube by œdema and collections of mucus. In order to open the tube and restore the balance of pressure between the middle ear space and the outer atmosphere—a rarefaction of the air in the middle ear having resulted from absorption—it is necessary to resort to inflation through the Eustachian tube. This is best done by Politzer's or Gruber's method, the latter being the method in infants who unconsciously, in crying, emit the sounds necessary to closing the space between the middle and upper pharynx. This should be done daily until the acuteness of the attack has subsided, and then less often until there is complete restoration of equilibrium between the throat and middle ear cavity, and proper patency of the Eustachian tube insured. Failure in this may be the cause of permanent injury to hearing by long-continued rarefaction in the middle ear and pressure on the drum-membrane and chain of bones from without.

In dealing with acute suppuration, treatment should begin at the commencement of the attack, and suppuration averted, if possible. In the stage of acute catarrh, a hot foot-bath, diaphoretics, uniform temperature, and warm douching of the outer ear will afford wonderful relief, and often terminate the attack short of suppuration. But if suppuration is imminent, and the drum-membrane bulging, paracentesis should be resorted to, rather than allow spontaneous rupture with a ragged opening and much cicatricial contraction in healing. A paracentesis at this stage generally gives exit to serum and mucus tinged with blood, from the incision in the drum-membrane, followed by almost immediate relief from pain. After the paracentesis a Politzer should be given to blow out the fluids accumulated in the middle ear. All syringing after this should be done with aseptic fluids. By careful attention to details, suppuration may not follow, even when this state of affairs has been reached; and the paracentesis is an important factor, when timely done, in averting such result. If suppuration does not follow, the further treatment should be the same as already suggested for acute catarrh. If suppuration follows, it should be treated by cleanliness, antiseptics and astringents, until it has ceased, and the perforation in the drum-membrane healed. At this stage the patient is commonly discharged and all treatment suspended; and it is just here that seeds are sown for future trouble. The mucous membrane of the middle ear is still in a swollen and infiltrated condition; the drum-membrane has a contracting cicatrix forming, altering its curvature, and by bands of cicatricial formations within, being drawn inwards and causing pressure on the labyrinth through the foot of the stapes; the Eustachian tube remains for some time impervious to natural methods of opening it, and rarefaction of the air in the middle ear thereby ensues, thus augmenting the labyrinthine pressure and disturbing proper circulation, in that the arterial walls in the mucous membrane do not meet with proper resistance. Slowly these abnormal processes recede towards a healthy condition, but quite commonly stop short of it; and in the course of time, defective hearing, with constant tinnitis aurium but too plainly point the result of insufficient treatment.

When the suppurative process is at an end, and the perforation in the drum-membrane has been filled

by cicatricial tissue, it is imperative, in so far as the integrity of hearing for the future is concerned, that methodical treatment should be given. The drum-membrane should be exercised, together with the chain of bones, to prevent anchylosis and loss of motion; the Eustachian tube should be daily opened so as to restore a proper balance between the air in the middle ear and the outer atmosphere in order to avoid rarefaction and congestion of the mucous membrane; and the naso-pharyngeal region should be toned up by appropriate remedies.

To effect the first and second, the best means at our command is the air-bag, and the preferable method of using it is according to Politzer. A Politzer should be given daily until hearing is restored to normal or nearly normal (a certain amount of impaired hearing nearly always remains after a severe supperative otitis media), which should be determined by carefully repeated tests, if the child is old enough for such tests, or so long as will insure all the restoration possible in case it is not. By the observance of these rules no very great impairment of hearing ought ever to follow an ordinary case of suppurative otitis media, either immediately or remotely. The importance of this finishing treatment in these cases should be more generally recognized, and is as applicable in older persons as in children. One of the consequences of acute suppuration of the middle ear in children, viz., chronic suppuration, is only mentioned to remind of the importance of proper attention to the acute affection. The exanthemata in children excite the most violent and destructive suppurative processes in the middle ear, which show a special tendency to become chronic, but by appropriate and persevering treatment resolution with very fair hearing is almost invariable.

THE TREATMENT OF MALARIAL AILMENTS FROM THE STANDPOINT OF THE GERM THEORY.[1]

J. S. SHIBLEY, M.D.,

OF PARIS, ARK.

It would doubtless be premature, at this time, to accept the germ theory of malaria as a demonstration; but it may be received as a "good working hypothesis," and a trusty guide to the treatment, which to my mind it greatly simplifies.

The treatment of malarial diseases, is so old a subject, that it is after some hesitation that I have concluded to obtrude it on your attention. Yet, when we remember that hundreds of deaths occur, every year, in our State, from this cause, every one of which ought to be prevented, we may well give to it our earnest attention. Not until it is so well and so generally understood, that every case treated shall be cured, will it be out of order to discuss it.

For the present, let us assume that the malarial poison consists of living organisms which, having gained access to the circulation are carried with the blood current to every organ and tissue. That these organisms have the power under favorable conditions, of multiplying in the system, reproducing generation after generation indefinitely, and deriving the material for their production and growth from the living tissues, especially the blood and nerve tissue. This process of reproduction and growth of the morbific agent, excites in some way unknown to us, a rise in the temperature of the patient, with all its accompanying phenomena—a fever, which is natures reaction against the morbid process, and by which it is at length interrupted more or less completely, producing an intermission or a remission. But the poison is not all destroyed; some of it remains in the system, and at the appointed time will again give rise to the same sequence of events. Such is the course in ordinary intermittents and remittents. But should the system from some cause, fail to react by fever against the germs, they multiply unchecked to the speedy destruction of the patient, as we see in cases of malarial collapse, mis-called congestive chills.

From this view of the nature of malarial poisoning, we can readily see why the eliminative treatment, whether by vomiting, purging or sweating, is so little satisfactory, since there is no evidence that the poison is eliminated by either of these methods. The derangements of the digestive and biliary organs are the effects of the morbid process, and not its cause, as formerly supposed. They are very closely allied to, if indeed they be not a part of, the nervous phenomena; and they will vanish rapidly on the removal of the cause.

The curative treatment is antidotal; and its proper application consists in the selection of such germicides as will kill the bacteria; and in using them in such manner as to be both effective and harmless. Fortunately, we have in the alkaloids of the cinchona bark the efficient germicide, but we cannot say that it is always harmless. Indeed its use under the varying conditions of malarial ailments, required constant care and no little caution to cure the disease without injury to the patient.

To summarize the treatment of malarial fever: 1st, It should be instituted with the least possible loss of time. The longer the germs are permitted to multiply and grow, the greater will be the damage inflicted on the system. Delay is dangerous; for even mild-seeming cases may become pernicious. 2d, It is usually better to allay the nervous symptoms before resorting to the antidote. A full dose of opium in some form, with one of the bromides or with hydrobromic acid, is the best preparatory treatment. Besides relieving pain, vomiting, etc., it renders the system more tolerant of the action of the germicide. 3d, The cinchona salt should be given as soon as the opiate takes effect, and in sufficient, but not excessive doses. Eight or ten grains of quinine for a first dose, followed by five grains every two or three hours till the fever yields, the influence of the opiate and bromide being sufficiently maintained to prevent distress of any kind, will usually effect a cure speedily, safely and pleasantly. Excessive doses of quinine, such as thirty or forty grains, are unnecessary, unpleasant and unsafe. 4th, After the cessation of the fever, the system should be fortified against the growth of any germs that may remain, by the con-

[1] Read before the State Medical Society of Arkansas, April 22d, 1885.

tinued administration of germicides and hæmatinics. The best are cinchona arsenic and iron; and their use should be persisted in till the cure is complete.

In pernicious fever, the same principles guide us in the treatment. The leading indication is to destroy the morbific germs as quickly as can be done with safely to the patient.

In the comatose variety, the coma is not the index of congestion of the brain, but of the injury done to the nerve centers by the malarial parasites. It will yield readily to the treatment that removes its cause, *i. e.* to cinchonization. As the patient gets under the influence of quinine he will wake up as from a sleep.

In the convulsive variety, the convulsions are but another manifestation of the action of the poison on the nervous system. But in this case it will not be safe to resort to the antidote till the irritation of the nervous system has been allayed. Quinine and all its congeners are nervous irritants, and may add to the danger. We must first place the shattered brain and nerves in splints, so as to speak. For this purpose, morphia, given subcutaneously, is prompt, efficient, and safe. Then bring the system quickly and decidedly, though not excessively, under the influence of quinine, and you cure your patient.

The algid variety is much the most serious and dangerous form. Here the system does not react against the poison. The great danger lies in the excessive depression of the circulation. This would seem to be secondary to irritation of the nerve centres by the poison, and brought about by reflex action, being analogous to the condition of shock in surgical injuries. The problem is to maintain the circulation till the career of the destroying bacteria can be arrested. To fulfil this indication, morphia and atropia, by cutting off the reflex irritation from the heart and digitalis, as a cardiac stimulant, are exceedingly valuable. One-fourth grain morphia with one sixtieth grain atropia may be given by subcutaneous injection and repeated every half hour until improvement in the pulse is manifest, or until the narcotic effects of the morphia begin to appear. Ten drops of the fluid extract, or half a dram of the tincture of digitalis may be given in the same way and at the same interval, till the stimulant effect of digitalis is obtained. Of course remedies so powerful, are to be used with prudence; but it is necessary to use them so as to be promptly effective, ere the opportunity for treatment be forever past. At the same time we should give by the mouth moderate doses of quinine in solution; say five grains every two hours. I do not now make use of tablespoonful doses as I once did. They are too depressing and I fear may add to the peril of the patient.

This treatment by morphia, atropia and digitalis has been followed by Dr. T. D. Nichols, of Paris, and myself, for several years, with a very gratifying degree of success, having saved several cases such as uniformly died under the treatment formerly pursued by us, which consisted in the use of friction, heat, and rubefacients, externally, and diffusible stimulants and heroic doses of quinine, internally. Latterly we have discarded all disquieting measures, as tending still further to depress the vital force, which we endeavor to husband by rest and comfort, inflicting no further pain than what is caused by the hypodermic injections.

In severe cases of malarial collapse medication of whatever sort by the mouth alone, is apt to prove inefficient, for if the medicine be not rejected the stomach has little power to dissoive or absorb it. The essential point is to bring about reaction, to re-establish the functions of the vascular system, so as to allow the great antidote to be absorbed and brought into contact with the poison in the circulation.

In pernicious fever in all its forms we must divest our minds of the idea of congestion, as the essential pathological condition. Whatever degree of congestion may be present is only symptomatic of the action of the malarial poison on, or through, the vasomotor system of nerves, and it will disappear on the removal of its cause.

INJECTIONS OF ETHER IN SCIATICA.[1]

BY Z. ORTO, M.D.,

OF PINE BLUFF, ARK.

I desire to call attention briefly, to a case of sciatica, successfully treated by hypodermic injections of sulphuric ether.

On Oct. 29, 1884, I was called to see Mrs. C., whom I found in bed, suffering greatly with pain in her right leg and hip—unattended by redness or swelling. Mrs. C. is 39 years old, of a nervous temperament, has a good family history, and has always had good health until the birth of her last child, which occurred on Feb. 14, 1883. The patient states that three days after the birth of this child fever came on, and continued for about six weeks, during which time she was unconscious; and that when the fever ceased and conciousness returned, she was unable to move her right leg without excruciating pain. There were spasmodic contractions of the limb, which caused great suffering. She states she remained in about the same condition, except that there was a gradual wearing away of the pain, for six months, at the end of which time, she was able, by the aid of crutches, to move around the house, but at no time was she free from pain—and two weeks prior to my first visit she was again seized with the intolerable pain in her right hip and leg that had previously caused so much trouble. She at once went to bed, and had been compelled to keep under the influence of opium.

On examination, I found tenderness all along the course of the sciatic nerve, and, as before stated, without redness or swelling of the limb. All movements of the limb had to be performed by the aid of the patient's hand applied to the thigh, and with the left foot under the right. I at once diagnosticated sciatica; and having read of some cases successfully treated by hypodermic injections of sulphuric ether, by Dr. C. G. Comegys, of Cincinnati, published in the *Cincinnati Lancet and Clinic*, for July, 1878, I determined to give this remedy and method a trial.

[1] Read before the State Medical Society of Arkansas, April 23d, 1885.

On the morning of November 30, my patient received the first injection of twenty drops, the syringe being inserted behind the trochanter major, the point recommended by Dr. Comegys. The injections were given in the ordinary superficial way. Seven injections were used in all, at intervals of twelve hours, using in the last six thirty drops each. The injections were followed by violent pain of a burning character, which, however, soon passed off. The patient declared she could taste the ether distinctly by the time the syringe was withdrawn. The acute neuralgic pain was relieved by the first injection, and never returned as severely as before. Improvement was noted from the beginning, the patient sleeping soundly without any other anodyne. The progress of the case was favorable, though rather slower than those of Dr. Comegys, though I think this may be accounted for by the former condition of the patient. In less than ten days the patient was able to be out of bed, and has since been attending to her domestic affairs, enjoying perfect health, save a little stiffness in her right leg.

So far as I am aware, Dr. Comegys was the first to call the attention of the profession to the value of this remedy in sciatica. From my experience with ether, in this one case, I am prepared to agree with him when he says "in this I believe we have a safe and efficient remedy for this troublesome and painful disease." He believes it to be equally efficacious in circumflex neuralgia as well as *tic douloureux*. Heretofore ether used hypodermically has not been satisfactory as an anodyne. As a stimulant to the heart's action, it has been used quite extensively by some practitioners.

Arnozan, in a recent publication, states that ether when used hypodermically produces an acute neuritis. Its action in sciatica is certainly open to investigation, and cannot be harmonized with the above theories, if our present view of the pathology of sciatica be correct. Local irritation rarely ever results from its use.

Pine Bluff, Ark., April, 1885.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

THERAPEUTICS OF JABORANDI.—M. PETITHAN, in a paper upon the therapeutic uses of jaborandi, claims its efficacy in the treatment of the following diseases:

2. In all catarrhal and rheumatic affections, subacute or chronic, whatever may be their localization.

2. In all dropsical conditions, without alteration in the kidney, when anæmia is not too marked.

3. In certain cases of pernicious intermittent fever in which reaction is hastened without affecting the action of quinine.

4. In malignant febrile exanthemata, especially in scarlatina.

5. In diseases of the skin, characterized by dryness, psoriasis, etc.

6. In chronic syphilitic disease during the employment of mercury and the iodides.

7. In mercurial intoxication.

8. Probably in diphtheria.

The remedy according to M. Petithan, should be used as follows:

1. It should be administered when the patient is fasting.

2. The dose should vary according to the case, 60 grains being an average quantity.

3. The temperature of the infusion should vary according to the degree in which the sudorific effect is desired.

4. A local temperature of at least 66° F. should be constantly maintained.

5. The patient should not be permitted to leave his bed on any pretext unless well covered, in order to avoid variation of temperature and syncope, which may result therefrom.

6. Warm drinks should be administered if the patient is thirsty, a condition very rare owing to the salivation produced by the drug.

7. The employment of a good quality of the drug, that of Coutinho being the best.

8. To have at hand stimulants such as ammonia, etc., to sustain the patient.

9. If necessary to administer an antidote; M. Petithan suggests the employment of belladonna.—*Bulletin Général de Thérapeutique*, July 15, 1885.—*Medical News*, September 26, 1885.

MEDICINE.

POISONING BY COCAINE.—DR. W. B. MERRIMAN reports the following case: C. J., aged 28 years, formed the morphine habit by taking it for sick headache. On or about May 1, he went to Cleveland and was advised by a physician to take cocaine, and it sickened him. He commenced by using one drachm of the four per cent. solution per day, and gradually increased the dose till he was taking from five to seven drachms per day hypodermically. I was called to see him on September 17, and found him with low grade fever, pulse 100 and very weak, mind wandering, very nervous, had had no sleep for three days; in fact, going through all the grades of delirium tremens. Bromides and stimulants quiet him while he is under their influence.—*Cin. Lancet and Clinic*, Sept. 26, 1885.

BENZOL IN EPITHELIOMA OF THE EYELID.—At the meeting of the Brooklyn Pathological Society, on March 12, 1885, DR. ARTHUR MATHEWSON reported the following history of a case: An Irish laborer, 50 years old, was first seen October 31, 1883, when he had a growth on the right lower lid, projecting two-thirds of an inch, with an ulcerated surface. It had first been noticed, as a warty excrescence, a year or two before, and had lately begun to grow rapidly. Microscopical examination, by Dr. W. H. Bates, showed it to be clearly an epithelioma. At first the treatment consisted in dusting the granulating surface with calomel; afterwards (at the suggestion of Dr. Bates, who had records of two cases of epithelioma treated successfully, in his own practice, with the agent) in applications of benzol. After about three months' use of these remedies, applied three or four

times a week, the growth had completely disappeared, leaving a smooth, depressed cicatrix. On the 1st of March, 1885, the man came back, with the history of a small ulcerating spot having appeared some six months before at the outer edge of the cicatrix. This was extending rapidly, but quickly began to contract under renewed applications of the same remedies, and was much reduced in size when the patient was presented at the April meeting of the New York Ophthalmological Society. On the 1st of May, when the patient left town, it was scarcely noticeable. On the 8th of July the man appeared again, with a considerable increase in the size of the ulcerating surface, but it had again yielded promptly to the applications. The benzol was brushed over the ulceration and the adjacent surface after they had been carefully wiped, and calomel was then dusted on. The applications were made from two to four times a week.—*N. Y. Med. Journ.*, Sept. 26, 1885.

Tanghin in Nervous Diseases.—This ordeal poison of Madagascar, derived from the apocynaceous tree variously named by botanists *Cerbera venenifera*, *C. maughas*, *C. tanghin*, *Tanghinia venenifera*, and *T. veneniflua*, has been made the subject of experiment by M. C. E. Quinquaud. Its action on the central nervous system is specially characterized by an exaltation of the bulbo-spinal reflex activity. After a certain number of experiments on animals, M. Quinquaud administered an extract to man, in doses ranging between three-quarters of a grain and a grain and a half, in various diseases, notably toxic paralyses, tremor, intestinal atony, and incontinence of urine. Satisfactory effects were obtained, but only on condition that the use of the drug was ceased as soon as the patients experienced headache, nausea, vomiting, and a certain amount of debility.—*Gazette Hebdomadaire.*

SURGERY.

A Modification of the Procedure of Wiring Bones.—Dr. Wm. H. Fluhrer, of New York, after describing his instruments for this operation, gives the following details:

The bones to be wired are sufficiently bared, but need not be completely denuded. The withdrawal of the soft parts for drilling through the smallest possible incision is effected by means of the grooved retractor, which not only retracts but at the same time depresses the obstructing tissues. The drill is passed along the channel of the retractor directly to the bone, cutting its way through any overlying soft tissues by an incomplete rotary motion. When the bone is reached the drill should never be withdrawn in any degree for fear of fouling, but should be urged onward by a rotary motion with continuous and light pressure. The drill being made in one piece, and larger at its head than in the shank, its progress, like that of a probe, can be nicely felt as it passes through the bone, which would not be the case were the mechanism for drilling a complicated one or were the drill driven at high speed. In drilling transversely through a bone, as in the case of the upper end of the tibia, the passage of the head of the drill through the proximal portion of compact bone, through the cancellous structure, the striking of the distal portion of compact bone and its passage through it can all be clearly discriminated. The emergence of the point of the drill having been detected by the finger watching at the presumed place of exit, or being known by the change in resistance, the next step is to pass a loop of silk through the bone to serve as a conductor for the wire suture. The silk should be of a thickness barely large enough to fill the notch in the drill. When the end of the drill is far below the surface, the fork is needed to deposit the thread in place. When the soft parts crowd upon the buried end of the drill, they should be pressed back by using the retractor; then the end of the drill is received into the groove of the retractor, and is easily accessible to the fork carrying the loop of thread. When the silk has been lodged in the notch, it is held there by gentle counter-traction, while the drill is cautiously withdrawn without rotation, leaving the thread in its place. When the end of the drill is far below the surface, the counter-traction may be exerted through the medium of the fork. By a dexterous movement the loop may be shifted from the secondary forks into the crotch of the primary fork around which it plays as a pulley as it is drawn through the bone. It is essential that the closed ends of the loops should lie between the bones to be wired. If, therefore, a loop needs reversing, a second thread is passed through the existing loop, by means of which the new loop is pulled through the bone into position. The free ends of the thread are then passed through the loop and drawn tightly across the face of the bone, thus lining off the broken or sawn surface, and indicating clearly where the drill should be passed through the opposing bone.

The conducting loops, or guides, for the wire sutures having been lodged in place, the next step is the drawing of the wires into position. The bent end of the wire suture is hooked in the end of a loop of thread which has been freed, and under a little counter-traction is fed to the opening while the operator pulls upon the conducting loop and draws one-half the wire through the bone. The end of the remaining half of the wire is then caught into a corresponding loop through the opposing bone, and is drawn into position. The bones having been brought into close apposition, each wire is embedded before being twisted. While the ends are held in their future position the scalpel is drawn alongside, cutting the subjacent soft parts and letting the wires sink down to the bone. The tightly drawn ends are then twisted and cut short to the twist, which is turned down. The slits in the soft parts are closed over the wire, which is to remain permanently, by a fine catgut suture.

By proceeding in the manner I have detailed, the wiring together of bones is a precise, easy, and expeditious operation. It can be done without extruding the ends of the bones through the soft parts, it being only necessary to cast the guiding loop of thread over the end of the drill, no matter how deeply the latter may be situated. It is easy to carry the wire transversely through the whole extent of bone,

thus securing an effective hold upon it. A suture only dipping into the cancellous structure, as is the case in the usual mode of wiring after an exsection of the knee-joint, may be regarded as a slack wire. It generally cuts partly through the soft bone tissue before the surgeon can apply retentive apparatus to the limb. On the contrary, when the sutures have been passed completely through the bones in the manner just described, they alone hold the bones firmly in apposition, and the grating formed by the wires prevents the intrusion of the soft parts. In an exsection of the knee-joint, in addition to four wires passed antero-posteriorly, I also bind the bones together by a wire passed transversely, which acts as a substitute for the lateral ligaments. In simple fractures of the patella, exsections of the knee joint, and compound fractures, I have passed the drill more than thirty times, besides being present when others have operated in the same manner, and I have never seen a failure or miscarriage in the execution of any step of the procedure.—*Medical Record*, September 26, 1885.

ON ERASION (SO-CALLED ARTHRECTOMY) OF THE KNEE.—MR. G. A. WRIGHT reports to the *Medical Chronicle*, July, 1885, his experience with this operation in sixteen cases. The operation consists in opening the joint freely by a semilunar incision, just as in the ordinary mode of excising the knee; the skin is reflected and the capsule removed on each side of the patella and patellar ligament, or, if preferred, the patella may be sawn across and the fragments turned upwards and downwards. If the former plan is employed, free incisions parallel to the long axis of the limb are made on each side of the patella, extending a little above its upper border as well as downwards nearly to the insertion of the ligamentum patellæ into the tubercle of the tibia; the object of this is to allow the patella to be freely displaced laterally, and turned round so as to expose its articular aspect during the process of erasion.

The rest of the operation consists in carefully cutting away with forceps and scalpel or scissors every particle of pulpy granulation tissue, all the infiltrated capsule and the semilunar cartilages, and scraping quite clean all the articular cartilage, picking out granulation tissue from any pits in the cartilage, and, if necessary, gouging away any small spots of diseased bone. The process must be most thorough, and extreme flexion of the limb is required to completely expose and clean the posterior part of the joint; the crucial ligaments are scraped, but carefully preserved, the lateral ligaments usually divided.

The upper synovial sac must be thoroughly cleaned. The most difficult part of the operation is getting away the posterior part of the semilunar cartilages, and the synovial membrane at the back of the joint.

The process is a tedious one, often taking one and a half or two hours, including the subsequent putting up in a splint. As soon as all bleeding has been stopped, the limb is fixed on an excision splint and dressed in the usual method, antiseptically. Wood wool is the dressing Mr. Wright prefers, from its perfect absorbent properties, and the firm, even support it gives; drainage should be at the back of the joint on each side, as after excision, the tubes being carried through openings made behind the joint. He prefers to Esmarch the limb before beginning the operation.

His reports include cases of pulpy disease with no suppuration, cases with varying amounts of bone disease, some with extensive abscess, some with small amounts of abscess, and, finally, cases where there was general tuberculosis. In those that have done well the common factors appear to be (1) Absence or very small amount of suppuration. (2) Superficial or at least not wide-spread bone disease. (3) Absence of general tuberculosis. In short, fairly early disease in a not hopelessly tuberculous child. Although in one case a freely movable joint resulted, he does not advise the attempt to obtain motility by early passive movement, except in a few instances where the wound has healed at once, and there is no obstacle in the way, such as dense and lowly vitalized cicatricial tissue. Erasion, if it fails, leaves the limb in little, if at all, worse condition for excision afterwards. In those cases where amputation became necessary, either the local or constitutional condition forbade hope of successful excision. Where it succeeds, erasion leaves as sound a limb as excision, without shortening. The limb is very liable to become flexed after healing of the wound. He thinks, then, that in suitable cases erasion is, in disease of the knee, better surgery than excision, but its application is strictly limited.

TREATMENT OF INCARCERATED HERNIA BY ETHER IRRIGATION.—In the *Russkaia Meditz.*, No. 3, 1885, p. 62, DR. V. BARTOSZ, of Romny, Poltava Government, writes that during the last two years he used ether with brilliant success in all his cases of strangulated hernia, seventeen in number. Irrigation was performed after Finkelnstein's method; that is, a tablespoonful of ether was poured over the tumor every half hour. The hernia disappeared spontaneously, or under slight pressure in the worst cases, within four or five hours. The duration of strangulation varied between a few hours and four days. The author describes, also, a case of internal intestinal obstruction in a woman, aged 60, with nine days' constipation, incessant fæcal vomiting, tympanites, thready pulse, etc.; in which, after all the usual means had failed, ether irrigation all over the abdomen brought about profuse stools in an hour and a half, the patient completely recovering.—*London Med. Rec.*, 1885; *Practitioner*, July, 1885.

VETERINARY SURGERY.—MR. SNARRY, a veterinary surgeon, has accomplished a novel feat in the way of surgery. A cow on the Westow Grange Farm, near York, broke its leg, and there being no chance of reducing the fracture, the limb was amputated, and Mr. Snarry tried the experiment of affixing a wooden leg. This has been found to answer admirably, and the cow may be seen grazing, with a calf by its side.—*The London Medical Record*, September 15, 1885.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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HARD TO PLEASE.

It is an old saying that none are so blind as those who do not wish to see. And it is equally true that none are so difficult to please as those who have no desire to be pleased. This is strikingly exemplified by the course of those few leading medical journals whose editors have undertaken to place all the obstacles possible in the way of successfully organizing the Ninth International Congress in this country. Although it was through the direct influence of a report made by a special Committee of which Dr. J. S. Billings and Dr. I. Minis Hays, editor of the *Medical News*, were leading members, that the American Medical Association was induced to appoint a Committee and authorize it to invite the International Medical Congress at Copenhagen, in behalf of the profession of the United States, to hold the next Congress in this country, yet so soon as the Association at its next meeting, held in New Orleans, insisted on having the terms of the invitation carried out by so altering and enlarging its Committee as to make it properly represent the profession of the United States, instead of a certain class in three or four cities, these same men took the lead in claiming that the Association had no right to meddle with the Congress in any way, or even with the Committee of its own creation.

When, notwithstanding their protest, the enlarged Committee, composed of able representatives from the several States, held its first meeting, and had only partially accomplished its work of preliminary organization, and before any authorized publication of the action taken, these same men, with a few friends, backed by the *Medical News*, *Medical Record*, and the *New York Medical Journal*, commenced a sudden but well concerted scheme of revolt or withdrawal from all participation in the Congress "as then proposed to be organized." This unprecedented and most unjustifiable course was ostensibly based on the pretense that the Committee had restricted the American Membership to delegates from the American Medical Association and the State Medical Societies in affiliation therewith, leaving out the national organizations of specialists, and thereby excluding large and influential portions of the profession from participation in the Congress. But when, after time for further consideration, the Committee of Arrangements held another meeting, and unanimously adopted Rules by which membership of the Congress was opened to all "members of the regular medical profession" in this and other countries alike, as fully as has been claimed for preceding Congresses either by Sir James Paget or Dr. Noyes, and from which all allusions to ethical codes, creeds, or distinctions of any kind were carefully excluded, the same parties and organs declare that the Committee has offered no compromises and has given no heed to the sentiments of distinguished men in Europe.

When the Committee of Arrangements, after adopting Rules with which the opposition could find no possible fault, and filling a sufficient number of appointments to constitute, under the Rules, the working part of the Preliminary Organization of the Congress, all further management of the affairs of the Congress was transferred to that organization, thereby making it as independent as any preceding Congress, the *Medical News* manifests its disgust by expressing the hope that the nation may be spared the disgrace of having the Congress held in this country, and singularly enough the *Medical Record*, not quite willing to have the Congress removed from this country, turns as its last hope to some *action* of *the American Medical Association* at its coming meeting in St. Louis for relief.

Finally, when the members of the recently created Executive Committee of the Congress itself hold their first meeting, and, in accepting the responsible duties assigned to them under the Rules of Organization, they declare that in doing so, it is with the full understanding that their action is to be restrained only by the Rules already adopted by the Committee of Arrangements, all three of the leading organs of opposition substantially charge the Executive Committee with rebellion against the authority of the Association, and with one accord, rehash and republish the full list of those who had *declined* months previously to participate, not in the present organization, but in the organization as suggested at the first

meeting of the Committee, in June last. Verily the managers of those journals must be hard pushed for material when they, by concert, resort to such subterfuges to keep up an appearance of opposition. They well know that the republication of this, now obsolete, list of declinations can have no effect in this country, but they evidently hope to keep up the impression in foreign countries of opposition to the present organization, and thereby discourage attendance from those countries. It is evident, from all the foregoing, that nothing has been done in the past, or will be done in the future, pleasing to those parties, except the action of the American Medical Association in Washington in 1884, when, yielding to the arguments of their own report, it adopted the resolutions by which they were appointed a Committee with what they supposed to be *plenary power* to appropriate the chief offices of the Congress to themselves, and distribute the rest among their personal friends.

LACTIC ACID IN THE TREATMENT OF LARYNGEAL PHTHISIS.

The suffering caused by tuberculosis of the larynx is so great, and the treatment of this affection is so unsatisfactory, that any remedy, which promises better results than have been attained hitherto, will be hailed with joy by physician and patient alike. We do not wish to assert that such a remedy has been discovered in lactic acid, but it has yielded such gratifying results in the hands of a German physician, that we think it should be brought to the notice of the profession in this country. The physician in question is DR. H. KRAUSE, a "privat docent," who in his capacity as an instructor seems to have ample clinical material at command. He has published his experience with this agent in the *Berliner klinische Wochenschrift*, of July 20, 1885, in an article entitled "Milchsäure gegen Larynx Tuberkulose."

His attention was first directed to lactic acid as a corrosive agent through a contribution to the *Centralblatt für Chirurgie*, No. 12, 1885, from the pen of V. Mosetig-Moorhof, who had employed it with great advantage first in caries fungosa, subsequently in lupus vulgaris, superficial epitheliomata, and in one case of broad, flat papillomatous growth. Mosetig-Moorhof found that the application of concentrated lactic acid caused the diseased tissues to assume the appearance of a blackish broth, while the healthy structures remained uninjured. The epidermis appeared softened and easily removable; yet the cutis was found to be intact. Dr. Krause says the idea of using this acid in tubercular laryngitis was suggested to his mind by the relation supposed to exist between tuberculosis and lupus, and by the unsatisfactoriness of all forms of treatment adopted up to that time. Moorhof had insisted that in order to destroy diseased tissues the acid must be brought into prolonged contact with them; but, realizing in the outset the difficulty of making so thorough an application to the larynx, Krause was not sanguine of success. He selected for his experimentation fourteen persons who had all been treated by means of sedatives, antiseptics and astringents without notable amelioration of the local symptoms. They all presented, on physical examination of the chest, well marked signs of pulmonary tuberculosis, and, upon laryngoscopical inspection, evidences of advanced inflammation. There were all gradations of the laryngeal disease, from greater or less infiltration, or mere ulcerous erosions to deeply penetrating ulcerations, severe perichondritis and infiltration of the highest degree, together with œdema of the mucous membrane. These cases are described at length, but their enumeration here would occupy too much space. The tuberculous nature of the laryngeal affection, Krause thinks, was placed beyond question by the discovery in each of the fourteen cases of the characteristic bacilli.

The author first applied a ten per cent. solution of the acid. The larynx was found to be quite sensitive to it, although this effect was transient. As rapidly then, as was deemed safe, he passed to the use of solutions of twenty-five, forty, fifty, sixty, and even eighty per cent. The weaker ones, up to fifty per cent., were attended by the same insignificant symptoms, whereas the stronger ones produced quite violent effects, such as temporary spasm of the glottis and a feeling of burning and dryness, which last persisted anywhere from one to six hours. Krause thinks it necessary to rub the acid thoroughly over the parts and allow it to remain in contact therewith for a short time. As applicator he recommends a not too soft piece of sponge or cotton. In order to reach the more deeply seated ulcerations he employed a syringe by which he applied the medicine in drops. The more violent symptoms soon passed into the sensation of a mild burning and a sourish taste. Other subjective effects were not noted, and even those described were greatly lessened by the application of cocaine previous to the acid. The laryngoscope now revealed a conspicuous paleness and diminution in the thickness of those parts which were previously red and swollen. Occasionally after the application of the stronger mixtures, and constantly after that of the strongest, healthy portions

of the mucous membrane had the appearance of being covered with hoarfrost. Where this was the case, the more unpleasant effects lasted longer, and the hoarseness was temporarily increased. In the next few days the ulcers were observed to be covered by a firmly adherent eschar. At the same time were observed a decrease in the swelling and infiltration, and, after separation of the slough, a growth of healthy granulations upon the bottom of the ulcers. Excrescences disappeared, while the ulcerated spots cicatrized and contracted. These local changes were accompanied by less difficulty in swallowing and an improvement both in the voice and subjective sensations.

In one case the ventricular bands, which previously ulcerated and tumefied had touched each other in the middle, looked after two days as if underneath the slough, from their anterior extremity to the point of greatest infiltration behind, they had been hollowed out in places; while they were sharply distinguished by their grayish color from the pinkish hue of healthy parts posterior. After the separation of the slough, their deeply depressed surface appeared cicatrized, and close beside the bands crossing it were tiny excavations that looked as if they might have once contained tubercles. Altogether, there was a strong similarity to Mosetig-Moorhof's description of lupus after its treatment with the acid. Where no slough formed, a retrograde process was developed by which the infiltration and swelling gradually diminished. As soon as healthy granulations sprang up after a slough had been cast off, Krause applied the acid to these, with gratifying results, as attested by a most interesting case. In spite of assiduous treatment with approved remedies, the condition in this case had gone on from bad to worse until the parts had all lost their normal configuration, the vocal cords were distorted by excrescences and ulcerations, and swelling existed everywhere, so that deglutition was most difficult. Upon the free use of strong solutions of the acid the swelling and œdema disappeared, ulcerations shrank and cicatrized, the vocal cords regained something of their normal smoothness, and the act of swallowing again became possible. Submucous infiltration and swelling became most readily absorbed when the acid could be made to reach the parts directly, which was done by scarifying the mucous membrane, if rendered necessary by the absence of ulcerations. As might be expected, the results were different according to the location and extent of the local changes, and the general condition of the patient. Pain and secretion were always lessened and deglutition made easier.

In a word, Krause thinks he has discovered in lactic acid a therapeutic agent by which thickening and œdematous infiltration due to perichondritis can be diminished, excrescences removed, and ulcerations cicatrized and contracted, as in one instance where the vocal cords, notched and ragged, became tolerably smooth and even. Where the constitutional disturbance is not too profound and the laryngeal destruction not too deep, the extension of the disease within the larynx can certainly be controlled; and in graver cases, pain can be relieved and the act of swallowing rendered less difficult—even if nothing more can be accomplished. In comparison with other therapeutic measures, this is assuredly a great gain. Krause has likewise found the acid serviceable in affections of the nose and pharynx attended with hypertrophy and granular degeneration, or tenacious and obstinate secretions.

LATENT TALENT IN THE PROFESSION.

In the *British Medical Journal*, of August 22, is a very excellent editorial article on "Culture in the Medical Profession." Of it, however, we can only say that it urges upon medical men the importance and benefits to them and to the public of extending, when possible, their accomplishments beyond their professional sphere. To a certain extent—and to a large extent, this is true. But it would seem that outside work, and outside accomplishments, should be taken up with the view of at some time utilizing them in professional work. The list of medical men who have become distinguished in other fields than medicine is long and exceptionally brilliant—but as a rule in these cases they have distinguished themselves more in the outside field than in their proper life-work.

It is an unquestionable fact that a man must write if he would be known. It is not always the most brilliant man who wins the most reputation, or who has the largest clientèle; nor is it the most steady plodder, who does his work methodically, who is most often quoted as an authority; nor yet is it the man who has a paper for every meeting of his medical society, and one a month for every journal that will give him space. But in the greater number of cases it is the man who writes well, and who always has something to say when he writes. And this leads up to another matter, which seems to be looked upon very often as an accomplishment, and but too seldom as a necessary accomplishment—a knowledge of the English language, or, more properly speaking, of the mother-tongue, for our remark is equally true of writers in other languages. It is a curious and

lamentable fact that the proper study of the mother-language is neglected in every country. Children are pushed into ancient languages and other studies before they can frame a correct sentence in their own language, with the hope, that is but too seldom realized, that they will learn it at a later day. The effects of this neglect are but too often seen in the writings of those whose education has been thus abused. But we trust that no one will think that we refer especially to Americans in speaking of this matter. Americans, as a rule, write as well as their English cousins, and it must be said that both the English and Americans are much less diffuse in writing than the Continental writers.

The medical men who will be leaders of medical thought twenty years from to-day will be those who commence to write now, and who will *learn* to write later; for it is not to be supposed that anything like perfection in writing will be attained without much labor and study. One of the most desirable and useful accomplishments for a physician, therefore, is the ability to write well in his own language—and it should be considered as a necessary accomplishment, as it seems to be no longer regarded a necessity in itself. To read and write a foreign language with ease is certainly very desirable, but it should be considered as a matter rather secondary to that of learning the mother-tongue; for he who only half knows English, and becomes proficient in French and German (and possibly Italian), will in the end inevitably produce a compound that is neither pleasant nor correct. It might almost be said that one can never attain to perfection in writing a language; but such a degree of proficiency may be attained that what is written is pleasing and easily understood. We know that the best writers are those who so express themselves that the reader grasps their ideas without direct effort; and it is equally certain that he who can express in one page what another can scarcely crowd into two, has an enormous advantage.

Their are hundreds of young men in this country who are allowing talent to lie fallow. To them we would say: begin to write now; if what you write does not suit you, or does not suit the editor to whom you send it, re-write it, for the fault is not in the editor who rejects it, but in the writing—supposing that there is anything of value in the foundation of the article. It is a well settled fact that those who become distinguished as writers begin to write early in their professional career. It is very seldom that a man will commence to write late in life. And as a rule, he who begins to write late in life is much more impatient of having his writings corrected than the young writer. Those who write much know that it is a part of the duty of an editor to revise manuscripts, and that he makes corrections equally for the benefit of the writer and of his journal. Few editors have the time to revise a paper for the pleasure it gives them—and one who can derive very much pleasure from this work, or who can regard it as a pastime, must have an abnormal view of what constitutes pleasure.

There are doubtless some who will think that we are wasting our own and the reader's time in making these suggestions—and it is likely that to many we are speaking to the wind; for it is not difficult to find those who are so well satisfied with themselves that they are as heedless of advice of this kind as they are careless in their use of language. There are many who resent any interference on the part of an editor with what they are pleased to term their "English," but who would be much chagrined, if they really know the language, to see that they have committed such offenses as using "allude" for "mention," "apt" for "likely" or "liable," "preventitive" for "preventive," "instances where" for "cases in which," "diagnose" for "diagnosticate," and a few hundred other common errors, such as capitalizing every other word (except proper names), which could be easily avoided by studying one or two of the many books regarding the use of words—and occasionally consulting a dictionary. We have said nothing of the errors in grammar which are so common; for, first, the writer who persistently makes these errors is almost hopelessly lost (as is his reader when he attempts to understand what is written); and, secondly, because when a person has sufficient self-respect, and consideration for others, to be careful in his usage of words, he has already become careful as to the framing of his sentences.

There are few physicians who do not see at least two or three cases every year which are worthy to go on record; but the case should be first carefully observed, and then carefully reported. It is entirely unnecessary to wait for a case such as has never, or but very rarely, been observed before. A careful report of an interesting case of diabetes or phthisis will have many more readers than a report of a case of tylosis of the hands, with half a page of bibliography. So, also, the writer who knows when he has finished a paper, and stops at the end, will find more readers than he who writes rather by the amount of paper at his disposal than by the ideas to be presented. Lastly, use English words, and a short word when it will serve the purpose of a long one. Do not sandwich German and French words in English sentences,

as is often done by those who are beginning to learn a foreign language. One who does not know German might think that a new preparation was meant when he reads that a patient was ordered to use an "Opium-stuhlzäpfchen" at bed-time; and would be disappointed to learn that is only a common opium suppository.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF VIRGINIA.

Sixteenth Annual Session, held September 15, 16 and 17, 1885.

(*Concluded from page 415.*)

THURSDAY—AFTERNOON SESSION.

After the induction into office of the President-elect, Dr. Rawley W. Martin, the retiring President, Dr. S. K. Jackson, was elected an Honorary Fellow of the Society.

THE REPORT ON ADVANCES ON HYGIENE AND PUBLIC HEALTH

being called for, Dr. Edwards announced the sudden death of the reporter, DR. WM. H. COGGESHALL, of Richmond, Va., on September 7th, just after he had finished his paper. By unanimous vote Dr. Edwards was requested to read the report, as prepared by Dr. Coggeshall, after which it was ordered to be published. His subject was

THE RECENT EPIDEMIC AT PLYMOUTH, PA., AND THE LESSON IT TEACHES.

He gave in detail the history of the epidemic of typhoid fever which has lately so decimated the town, and showed conclusively that from the non-sanitary care of the excreted products of one adult lying sick with a serious attack of the fever, the entire epidemic was traceable. A man living within fifty feet of the bank of the mountain stream from which the residents of Plymouth derive their main supply of drinking water, was taken sick about January 1st, 1885, with typhoid fever, contracted in Philadelphia, and during the months of January, February and March all his dejecta were thrown out—without any precautionary care as regarded disinfection—upon the snow, and in a common country privy without vault or earth-box, where the contents remained for the time simply on the surface of the ground. These two different piles of poisonous excretory matter were not thawed until March 25th, when a warm rain carried the non-disinfected mass into the stream, dissolving it and liberating the hitherto hibernated noxious organisms; and after the usual incubatory period of ten to fifteen days had passed, citizens using hydrant water were taken down with the same disease in different parts of the town, until within ten days from the outbreak, nearly if not quite one thousand people were sick with the fever. During this time not one person using well water was attacked with the malady, but Plymouth having no drainage system except upon the surface, besides having many of its privies constructed without vaults, and being abominably dirty itself, according to all disinterested accounts, the wells soon became polluted with the specific poison germs of the disease, and ceased to yield safe drinking water. No one habitually using Susquehanna river water (near at hand) and employing ordinary care, was stricken down by the malady. One in seven, in a city having a population of about ten thousand, suffered, more or less, from the fever during the epidemic, and over three hundred lost their lives before its finality.

After specifying a number of peculiarities of the malady, the writer offered the following as conclusive lessons taught the profession by this one particular epidemic of typhoid fever:

1. That from an exceedingly small and apparently trivial source of infection, danger to a large number of persons may arise in the course of a zymotic disease.

2. That whatever doubt could previously exist in the mind of any member of the profession regarding the power of previously pure running water to become an active carrier of typhoid infective germs, has by this epidemic been entirely dissipated.

3. That the uncleanliness and non-sanitary condition of a town or city prolongs, in the direct ratio of its extent, the stay of an endemic or epidemic in such place.

4. That during a typhoid epidemic—and especially in its early stages—cases of the disease may, and do, occur where the patient, having proper sanitation at home, receives the poison germs into the system by the simple imbibition of water containing such organisms elsewhere than at home, without his or her knowledge or suspicion.

5. That a town can not afford to remain in an uncleansed condition, however remote danger from zymotic disease may otherwise appear, as such uncleanliness is a direct invitation to certain contagious and infectious diseases to establish a firm foothold in that place.

6. That a typhoid epidemic occurring in a city, once brought into existence from any cause, is easily enlarged and more fully developed by neglect of well-known and easily effected individual and municipal sanitary measures.

7. That the water supply of a town or city—notwithstanding the safeguards commonly thrown around it by the municipality—can easily be transformed, suddenly and unexpectedly, by contamination, into a poisonous condition for the uses of a community, from a source at once remote and individual.

8. That careful and thorough disinfection of the excreted matter—both liquid and solid—voided by a typhoid fever patient, is of the utmost importance to the health of the surrounding community, whether in city or country, but, owing to lack of proper sewerage facilities, especially so in the latter.

9. That the physician practicing in a rural district which is in any manner, remotely or directly, connected with the water supply of a corporation, should exercise more than ordinary precaution to see that such water supply is placed in no danger of receiving

contamination from his patients, either actively or indirectly.

10. That although it has been the custom in past years to look upon the water of city wells in general as far more liable to hold contamination from poisonous organisms than water furnished from reservoirs, yet the "Plymouth epidemic" has shown that a condition exactly the reverse may exist.

11. That to eliminate all possibility of poisoning in this manner, from sewage or excretory matter, either through carelessness or ignorance, no human habitation should be allowed by law to exist near the source of a city's supply of drinking water.

Dr. Coggeshall closed by advising his hearers to recommend to the families under their care a more careful study of hygienic questions—so much of the comfort and happiness of life depending on a knowledge of such matters. And especially in view of the probable incursion of cholera next summer, he thought a great deal depended on the work done by physicians before that time in educating the people in sanitary knowledge, as to whether the scourge shall leave this country in a decimated condition or the reverse.

Hon. Fellow J. E. CHANCELLOR, of the University of Virginia, read an interesting paper on the

HISTORY, EVILS AND ADVANTAGES OF INHUMATION AND CREMATION.

The subject was opened by reference to the sanitary regulation of this country, the organization of the American Public Health Association and the National Board of Health; the rapid development of sanitation and hygiene. They had grown from almost absolute darkness into noonday light, and by this better light we were enabled to detect many of our errors and prejudices which were the accepted facts of the past. For centuries past we have been looking through a glass darkly dimmed by errors and sentiment born of heathen superstition and fostered by ignorance. No foul vapor polluted the earth beneath or air above; there was no decaying remains of man or beast to poison or destroy life. The custom of interment of the human body had been handed down from generation to generation. In the progress of time new customs and a new civilization developed, giving rise to different views and faiths as to things beyond the grave, which led indirectly to the disposition of the human body in various ways, viz: Exposure, inhumation, embalming, and cremation. Reviewing briefly the origin of these, stating incidentally early Egyptians had their Sautterians who, at an early period, detected the germ infection of the living by dead bodies decomposing. With the ancients, who believed in the immortality of the body as well as the soul, the disposal of the dead body was made with reference to their belief. It was conceded that earth burial with the Greeks and Romans was the more ancient mode, and that our present funeral customs are largely derived from them. The Greeks and Romans recognized earlier than any other nation the injurious effects of intra-mural interment, and passed stringent laws prohibiting it. The evil effects of the earth burial custom similar to ours were recognized 1600 years ago. History teems with proof of epidemics caused by decomposing human bodies, as established by St. Augustine and others. The investigation made an hundred years ago by Piatolli and Navier (1775) was cited as proof; also those of Ambrose Paré. In 1849 the city of London selected a commission of eminent scientists and medical men to examine the city cemeteries. Their unanimous report was that they were dangerous to public health and the cause of many severe epidemics. This commission, in speaking of the condition of many church-yards, stated that they were abominable, the smell revolting and distinctly perceived in the adjoining houses, in all of which choleraic and diarrhœal disease had occurred. Quoting from Sir Henry Thompson, a distinguished sanitarian of London, who had examined nearly a thousand authorities as to the dangers of earth burial, he says that thousands of human lives are cut short by the poison of slowly decaying dead and diseased animal matter.

Mr. Spencer Wells states that decomposing human remains so pollute the air and water as to diminish the general health and average duration of life. Dangers of earth burial were from the contamination of water, the air, and direct infection from exhuming remains and opening vaults, and the elimination of gases, etc. Investigations in every age, from Hippocrates to the present, have proved that polluted drinking water is the most frequent source of zymotic disease. The yellow fever epidemic in Portsmouth, Va., in 1855, was due to bilge water pumped upon the dock from an infected vessel. And the recent epidemic of typhoid fever at Plymouth, Pa., was caused by pollution of the city's water supply from the excreta of a case of typhoid fever near its source. What may we not expect from decomposing human bodies in the long-used cemeteries and burial-grounds of towns and cities. Much other testimony was cited to show that the whole list of zymotic and infectious diseases are capable of transmission per the contamination of water and air supplies. Soil and air infection was proved by recent investigations of MM. Pasteur and Darwin, and also by the investigations of Dr. Domingo Freire, of Rio de Janeiro, as to the causes of a recent epidemic of yellow fever in that city. He discovered that the soil of the city cemetery in which the victims of this epidemic were buried, was alive with microbian organisms like those found in the emesis and blood of those who had died of the fever. Professor Brachi's experience of the plague in Modena, in 1828, showed the effect of soil infection from victims of the plague who were interred three hundred years before. The terrible virulence of cholera in London, in 1854, was attributed to the same cause, viz: the upturning of the soil where the plague-stricken people were buried two hundred years before. The epidemic of yellow fever in New Orleans in 1853, and the great mortality (452 per 1,000 of the population), in the 4th district, was supposed to be due to the proximity of cemeteries in which three thousand bodies had been buried the year before. The custom of France, Germany, and Brussels restricting the excavation of wells within

certain distance of the place of burial, was alluded to, and regrets expressed that there was no such judicious sanitary regulation in the United States. The views of Sir Lyon Playfair, of London, were also cited in proof of soil infection by the dead, giving rise to the "Roman fever." Chemistry and the microscope have assisted in detecting the evils arising from inhumation of the dead, and with the progress of sanitation and hygiene of the present day, pointing out the errors of the past and offering a better and more certain protection to the living, we shall, in the near future, have a less objectionable way of disposing of the dead, which he proceeded to show was cremation; in that it was "safe, secure, permanent, innocuous, and at the same time practical, reverential to the dead, and offering no violence to the feeling and rights of the living."

Cremation of the 19th century was shown to be very different from that practiced by the ancients, a brief history of which was given. He was not forgetful of the fact that the public mind, with its prejudices established by long usages and moulded as a semi-religious sentiment, was not prepared to receive suddenly any radical change that centuries had endorsed; the demand for it must be made plain, and this must come from the educated and cultured, patient investigators and searchers after truth, those who mould public sentiment in all questions that pertain to the ill or good of their fellow-men. Cremation is attracting the attention of men of science and the general public in all countries. Sir Henry Thompson has done much to attract the attention of the English and American people to this subject. An account was given of its rise and progress, not only in Europe, but also in this country. Dr. J. M. Keller, of Arkansas, was mentioned as an able advocate of cremation as a substitute for earth burial; also, Dr. W. K. Curtis, of Chicago, and John Morris, M. D., of Baltimore, Rev. J. D. Beagley, of New York, and many of the leading scientists, sanitarians, divines and journalists of the present day. From a sanitary point of view, none can doubt that cremation is preferable to sepulture.

Dr. Philip Taylor, of Richmond, in his

REPORT ON OPHTHALMOLOGY AND OTOLOGY,

mentioned the practical benefits to be derived from the use of jequirity in trachoma, with or without pannus, and insisted on the fact that chronic purulent conjunctivitis should exist when jequirity is used. The recent theory of the transmission of sympathetic ophthalmia by means of the intervaginal lymph spaces of the optic nerve was given, and conclusions as to the conveyance of the septic poison by the ciliary nerves from the diseased or injured eye to the sound one—the once popular theory—were drawn. The use of cocaine was referred to as one of the most important discoveries made in ophthalmology for many years. Numerous operations that have been brought to the notice of the profession during the past year, were referred to, notably the one for pterygium, by Dr. Prince, of Illinois; another for evisceration of the eye-ball as a substitute for enucleation; and also one for transplantation of the cornea, in case of considerable opacities of the cornea rendering iridectomy impracticable. The danger of the operation for internal strabismus in the young, and making the correction absolute—pointing out the fact that as maturity comes on insufficiency is quite liable to follow, thus causing external squint.

In otology some recent preparations for purulent ear trouble were discussed, especially peroxide of hydrogen. New Eustachian catheters and the method of using bougies for dilating the tube, was approved. The relation between diseases of the teeth and ear was referred to, and statistics given showing that sympathy exists between these organs.

Dr. Jos. A. White, of Richmond, read some

CLINICAL NOTES AND PRACTICAL OBSERVATIONS FROM THE RICHMOND EYE, EAR AND THROAT INFIRMARY.

(See page 423.)

Dr. Charles M. Shields, of Richmond, read a

REPORT OF CASES OF TRACHEOTOMY IN LUPUS OF THE LARYNX AND DIPHTHERIA.

He mentioned the great variety of cases of lupus of the larynx, and selected the case of a retired physician, aged 55. When he first presented himself for examination, his symptoms were loss of voice, some pain in swallowing, and some dyspnœa. Laryngoscopic examination showed the epiglottis to be normal in appearance, but revealed a swelling entirely obliterating the right vocal cord and ventricular band. This growth was covered with pale, tuberculous elevations, having between them superficial ulcerations. The left side of the larynx was healthy, except some general thickening and congestion. The patient had never had syphilis; there was no phthisis in his family, nor were there any physical or constitutional evidences of phthisis in the patient. There was also no history of cancer in his family. Thus the three usual causes of laryngeal ulceration, syphilis, phthisis, and cancer, were excluded, and the probability of lupus suggested. This view was further sustained by the fact of there having been some skin manifestations of the same disease in the form of two points of ulcerations on the face that resembled lupus, and that would not heal until excised. He was treated with iodide of potash and cod-liver oil, and by local insufflations of iodoform and bismuth. No improvement occurred, however, and he continued to grow worse until about seven months after he first presented himself, and about two years from the beginning of the disease, when the left side of the larynx had become involved, and dyspnœa was so great as to necessitate tracheotomy. The larynx now presented the appearance as described by Morell Mackenzie, Cohen, and others, as peculiar to lupus, and the swelling was so great that no glottic aperture was visible. Tracheotomy was performed, from which the patient made a good recovery, and obtained relief from dyspnœa. He was taught to remove, cleanse and reintroduce his tube, and when heard from the following summer was doing well.

He also reported a successful case of tracheotomy for laryngeal diphtheria. The patient was a little girl of three years. She had, at first, fever and some

dyspnœa. The pharynx showed no evidences of inflammation, and was free from membrane. She was hoarse, and continued to breathe with more difficulty. On the third day two small patches of diphtheritic membrane appeared on the tonsil and posterior wall of pharynx, but disappeared in thirty-six hours. Iron, quinine and whisky were administered, and the room kept filled with the vapor of lime. She continued to grow worse, however, and on the fifth day of the attack was so cyanosed that tracheotomy was performed. As soon as the tube was introduced respiration stopped entirely, and artificial respiration was resorted to. For fifteen minutes no effort at natural breathing was made, and on removing the tube a piece of membrane was drawn from the wound which proved to be a perfect cast of the trachea, about two inches long. After this she did well. The wound became covered with diphtheritic membrane. The tube had to be kept in three weeks before breathing through the larynx was sufficiently good to permit its removal. She made a good recovery.

DR. CHAS. R. CULLEN, of Henrico Co., forwarded a paper on

INFANTICIDE.

This paper does not follow the ordinary routine found in the text-books on medico-legal jurisprudence, but merely seeks to call attention to the weakness of Virginia laws on the subject. Dr. Wm. H. Taylor, coroner of Richmond City for about thirteen years, furnishes statistics of 139 cases tried for infanticide during his term of office—forty-three whites and ninety-six negroes. Of the total number, not a conviction followed. The laws of England and Scotland have succeeded better. Of sixty-eight trials for infanticide, in London, fifty-three convictions followed. In New York and Pennsylvania, the laws are much more certain of securing convictions than in Virginia. The very harshness of the Virginia laws causes them to fail of good results. Dr. Cullen reports two cases of trials for infanticide which had come under his notice, showing the weakness of the Virginia laws, and he now calls on the Medical Society to aid in re-framing the State laws relating to infanticide.

Voluntary papers being in order, DR. L. ASHTON, of Falmouth, read a paper entitled

A PLEA FOR TRACHEOTOMY IN CROUP.

The good that is to result from the timely performance of tracheotomy is so great that it should be placed among the minor surgical operations. This classification would materially help to popularize it, and take from it that dread that parents so often have regarding it. The operation, in itself, is comparatively free from danger, but is a delicate one, requiring coolness and caution, and when performed hurriedly, is too often made difficult and dangerous. The operation not being dangerous in itself, nothing connected with its mere performance should influence the time when it is to be resorted to. As soon as it is decided that a positive mechanical obstruction to the entrance of air into the lungs, exists, operate, before secondary complications can occur—such as broncho-pneumonia, œdema of the lungs, prostration of nervous energy, etc. In the majority of cases of croup, death results from want of oxygen in the blood. It should be performed in all cases where the croup is progressive and unaffected by medical treatment. In a number of cases, the extension of croup is arrested by tracheotomy. The admission of air into the lungs through an artificial opening in the windpipe secures entire rest for the diseased larynx, and this leads to a suspension of diseased action there. The diphtheritic process, clinically speaking, stops at the level of the vocal cords much oftener than is commonly supposed. When the disease involves the trachea, it is by propagation from the larynx, and not by a simultaneous attack on the larynx, trachea and bronchi, and this extension downwards is generally prevented by early tracheotomy. Since the operation alleviates suffering, mitigates the symptoms, obviates secondary complications, and does not add one element of danger to the original disease, there ought to be no delay to its early performance. Many children have even been brought to life again by it, with the aid of artificial respiration.

EVENING SESSION.

DR. J. S. CONRAD, Superintendent of Matley Hill Sanitarium, near Baltimore, Md., by invitation read a paper on the

PSYCHOLOGICAL ASPECTS OF SUICIDE,

of which the following are the conclusions:

1st. Suicide increases with the advance of civilization, and is but little known in the savage state of men.

2nd. The act is an intelligent act, (?) done with a full consciousness of the act—as shown by the method of execution—whether by the sane or insane.

3rd. That suicide is done always for the purpose of escaping an evil, and for the benefit of the *felo-de-se* —whether by sane or insane.

4th. That it is a voluntary act, (?) whether by sane or insane.

5th. That it is an emotional act, whether by sane or insane—however deliberately planned and executed—since deliberation enters into the mind of both mental states.

6th. That delusions are not essential to the distinction as to the sanity or insanity of the suicide, since authorities affirm that delusions are not essential to the proof of insanity.

7th. That suicide is rare in the first class. Insanity (by Maudsley) viz.: intellectual or ideational insanity; but does occur in the vast majority of the second class—or affective or emotional forms of insanity.

8th. Query? Is suicide an intellectual act—notwithstanding the intelligence exercised in its execution? or is it an emotional act *per se*, since we have seen that the emotional part of mind dominates the ideational centres, and perverts the mind into becoming its humble servant.

9th. Does moral depravity satisfactorily account for it, when we have seen that moral depravity is a factor of both sane and insane?

10th. That in doubtful cases of the sanity or insanity of the *felo-de-se*, very great caution is necessary

in making up a just judgment as to the one or the other.

Dr. Archer Atkinson, of Baltimore, being present by invitation, read a paper on

IRRITABLE RECTUM,

embracing the very many causes of this distressing trouble, such as the great vascularity of the part; the abundant nervous supply from the cerebro-spinal and from the sympathetic system of nerves; and the frequent sources of congestion from riding, dampness, and from the irregularity of emptying the bowels, especially in the travelling classes. He dwelt at some little length on the anatomical relations of the part to the urethra, the prostate gland and neck of the bladder in male subjects, and on its proximity to the bladder, vagina, and the uterus in the female. The speaker referred to the efficacy of carbolic acid injections into the body of hæmorrhoids, and of the advantage of combining tincture of opium injections with the fluid extract of krameria with glycerine, to prevent as well as to allay tenesmus of the bowel and to favor reduction of the hæmorrhoidal mass and of the thickened mucous membrane. A clinical case was given of a lady over 60 years of age, in whom the artery of a large bleeding hæmorrhoidal tumor was ligated in a novel manner, the vessel having been rather felt than seen nearly an inch up the bowel, in the midst of a large growth, was embraced between the two ends of a stout carbolized ligature, the needle having been entered to the side of the centre of the mass and brought out on the other side, the loop including a portion of varicosed substance about one-fourth of an inch in thickness. After the removal of the ligature on the seventh day, the bowel was freely washed out, and the mass came away with the returning fluid, since which time the patient has done well, and been free from the *pelvic irritation* from which she has suffered for many years.

Dr. Wm. G. Eggleston, of Chicago, Ill., reported a case of

GUNSHOT WOUND OF THE HAND.

C. H. G., a physician, æt. 33 years, received an extensive laceration of the left hand while removing the cap from a loaded cartridge containing shot. The shell exploded, and the entire charge, so far as is known, passed through the hand. The wound extended, on the palmar surface, from a point immediately anterior to the normal situation of the deep palmar arch, between the metacarpal bones of the middle and third fingers, tearing the hand completely open thence through to the webbed junction of these fingers; tearing the flesh from the first phalanx of the third finger, save a small portion on the dorsal aspect, and breaking the first phalanx of this finger, and the metacarpal bones of the third and little fingers about the middle third.

The wound was thoroughly cleansed with hot water, the clots removed, flaxen sutures put in place, compresses placed over the palmar and dorsal wounds, and the whole metacarpal portion of the hand bandaged somewhat tightly with short bandages, to facilitate removal in case of hæmorrhage. The broken third finger was tied to the middle finger, to serve as a natural splint. Turpentine was then injected into the wound, and the bandages thoroughly soaked with it. Subsequently a drainage tube was put in, and the wound washed out twice daily with a 1–3800 solution of bichloride of mercury.

Seven months afterwards, the patient reported that the third finger was practically useless, but that he could do all he wished with the hand; "the grip is good, and the stiff finger seldom getting in my way." In conclusion, Dr. Eggleston remarked that it seemed that the third finger (the one most injured) should have been removed, together with a portion of its metacarpal bone.

Dr. W. R. Cushing, of Shawsville, read a paper on

PREMATURE LIVE BIRTH WITH THE MEMBRANE INTACT.

After reporting a case, in which the child lived some sixteen hours, he called attention to the effect that the possibility of such births must have upon the lung-test in deciding whether a child was born alive or not. Persons heretofore tried for infanticide have been admitted to be innocent whenever it could be proven that the child had never breathed. But in such a case as he here reports, the child could have been deliberately killed after being removed entirely from the mother, and still the condition of the lungs not only would not have testified against the party accused, but would have been admitted as conclusive evidence of innocence.

Dr. Wm. D. Hooper, of Liberty, reported a

CASE OF IRRITATION OF THE GANGLION OF REMAK, OR THE INHIBITORY NERVE OF THE HEART

cured by nicotin, according to the suggestions made by Prof. Rulliford, of London, in the *London Lancet*. It was administered by getting the patient to smoke tobacco. While using his first pipe, the blueness faded from his extremities, and the œdema soon subsided to an appreciable extent, and instead of the usual effects of the "first pipe," he felt better at the end than he did at the commencement of it. At the end of two weeks of the use of tobacco smoking, the attacks ceased, and he has remained in perfect health since, and is now an active practitioner of medicine in one of our inland towns.

Dr. Wm. C. Dabney, of Charlottesville, read a paper on the

PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF ANTIPYRIN.

After stating that it was first prepared by the action of acetic acid on aniline, and then giving its physical description, he then mentioned that in healthy persons it causes little or no depression of temperature when a dose of thirty grains is given. The frequency of respiration is not affected, but the pulse is always diminished in frequency. It generally produces perspiration in healthy persons, and nearly always causes profuse sweating in pyretic individuals. The urinary secretion is usually slightly diminished. It is eliminated by the kidneys, and is readily detected by the intense red color produced by the addition of a few drops of a solution of perchloride of iron. It probably produces its antipyretic effect by direct action on the thermogenic centres in the brain.

It is not markedly efficacious in pneumonia, though in some cases it acts admirably. Use it cautiously when the time for defervescence approaches lest collapse occur. In typhoid fever, two doses of ʒss each at an hour's interval, usually produces a fall of 2° or 3°, which lasts from six to twelve hours; but the course of the disease does not seem to be modified by it, except that it soothes the patient and he drops off to sleep. It lessens delirium, too, to a considerable degree. It acts favorable upon the nervous symptoms generally, and it also cleans up the tongue. It is generally conceded to be useless in remittent fever. In puerperal septicæmia, it gives good results —reducing the fever to normal temperature from 105.° Dr. Boldt, of New York, gave sixty grains in two cases, causing a semi-comatose condition and "symptoms resembling those of carbolic acid poisoning." In scarlet fever, favorable results are reported, —especially delaying the appearance of the eruption. Some say that in phthisis, it has given better results than all other antipyretic remedies combined. Others think its desirability in phthisis is questionable. It should be given with great caution in this disease for fear of inducing collapse. Agaricine or atropia prevents its producing too much sweating. It acts unfavorably in pregnant women. The unpleasant effects of antipyrin are collapse, and an eruption much like that of measles. The dose of antipyrin differs according to the disease. In phthisis, from eight to fifteen grains, repeated every four to six hours, is sufficient. In typhoid fever, pneumonia, and the like, it has been recommended to give two doses of thirty grains each at an interval of an hour, and an hour later still, give fifteen grains more; but more recently excellent results have followed doses of ten or fifteen grains every three or four hours. In children, the dose is a grain and a half for each year of the child's age. It may be given hypodermically in doses of from ten to fifteen grains, or by enema in doses of forty to sixty grains. When used as a suppository, it is said to have an excellent effect on hæmorrhoids.

Honorary Fellow, DR. J. M. TONER, of Washington, D. C., contributed *A Sketch of the life of Dr. Elisha Cullen Dick, of Alexandria, Va., One of the Consulting Physicians in the Last Sickness of General Washington*, which was received with a vote of thanks and ordered to be published in the forthcoming volume of *Transactions*.

Adjourned to meet in Fredericksburg, Va., during November, 1886.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Tenth Annual Session, held at Washington, Sept. 22, 23, and 24, 1885.

TUESDAY, SEPTEMBER 22—FIRST DAY.

The Society was called to order by the PRESIDENT, WILLIAM T. HOWARD, M.D., of Baltimore.

DR. SAMUEL C. BUSEY, of Washington, delivered the *Address of Welcome*.

DR. BUSEY then read a paper on

THE NATURAL HYGIENE OF THE CHILD-BEARING LIFE.

The hygiene of pregnancy related to the preservation of the health of the woman during those periods intervening between conception and the commencement of labor. The processes of transformation, development and growth which take place are physiological, but are nevetheless terminated with more or less injury to both mother and child. The unavoidable mortality, is however, small. The process of waste and repair, of growth and development, of organization and construction were next considered. There is no border line of health. We can not define where the physiological ends and the pathological begins. The child-bearing period begins with puberty and ends with the expiration of the years of maturity. Fertility increases from the commencement of the child bearing period until the climax is reached, and then declines to its extinction. The age of greatest safety of pregnancy coincides with the age of greatest fecundity. Beyond and under, the mortality increases with the increase and diminution of age, but the rate is higher with the increase beyond, than with the diminution below the age of maximum safety or least mortality. The age of nubility, should correspond with the ages of maximum fecundity, fertility, and least mortality. Puberty and nubility are not simultaneous. Too early pregnancies were deprecated. The speaker thought that nature presented the fifth quinquinial as the period during which the laws of fecundity, nubility and survival find their natural complement in relatively highest perfection. He considered first, pregnancies, as the most dangerous, and thought that the danger increased by too early and too late primiparity. The importance of lactation was next discussed.

The extinction of the child-bearing function protects the remaining vital forces from decay, but if the seeds of disease have already been sown, the change of life may increase their activity. The author thought that if the age of majority for women could be advanced so as to correspond with the first year of the period of maximum fecundity, popular prejudice and love of custom would sooner or later conform fashion to the law. He deprecated precocious matrimony and considered it the sequel of precocious puberty. In this country and in the higher walks of life, the ratio of precocious matrimony is on the increase; whether it be equally so among the middle and lower cases, he did not know. He concluded by saying that, the principal object of his paper was to direct attention to this subject, and to invite discussion upon it.

DR. JAMES R. CHADWICK, of Boston, stated that he had made a few investigations in regard to the early appearance of menstruation with reference to women of various nationalities in this country. In the examination of over 4000 cases, it was found that American women menstruated earlier than women of other nationalities examined. Furthermore, American women of American parentage, began to menstruate earlier than American women of foreign parentage. Scarcely enough observations in reference to the

menopause have been made to justify absolute conclusions, but he found to his surprise that the menopause is appearing later in American women. If this is corroborated, the conclusion would be that the child-bearing period is greater in American women than in women of other countries. The fact that the child-bearing period is increased both at the beginning and the end, he considered an indication of added vigor. There is no question of the fact that the number of children to a family is diminishing, but this can be accounted for by social influences and is common to all civilized communities.

Dr. Reynolds, of Boston, agreed entirely with the statement made by the last speaker, and he believed that in the community in which he lives, the women of the upper and middle classes menstruate earlier than they did twenty-five years ago. He also believed that this indicates an activity of function, which will prolong it beyond the average period of cessation.

A point of interest is in reference to the diminution of sexual power. He questioned whether this is not more dependent on individuality than on sex. He thinks it doubtful that women pass the period for the relation of marriage and of child-bearing sooner than men pass the period of procreation. This is, however, a most perplexing and obscure question.

Dr. Henry J. Garrigues, of New York, read a paper on

PUERPERAL DIPHTHERIA.

This is a disease not referred to in the majority of text books. It is one of the forms of puerperal fever, or rather one of the different diseases included under that term. It is distinguished by the appearance of diphtheritic exudation somewhere in the genital tract of the puerperal women. It is accompanied by well marked general symptoms, imperils life and calls for active treatment. The paper is based upon twenty-seven cases treated in hospital practice, and two cases occuring in private practice. The characteristic feature of the disease is the diphtheritic infiltration which is usually of light pearl-gray color. Generally appearing in small spots, and coalescing or extending by involving new areas, the exudation is firmly adherent to and imbedded in the underlying tissue. It is most marked at the points where the canal becomes narrow This may be explained by the more frequent occurrence of lacerations at this point. The posterior wall of the vagina is more commonly attacked than the anterior wall, which is probably due to the fact that it is bathed with the discharges from the uterus. The exudation may, however, appear on entirely healthy portions of mucous membrane, which have not been the seat of laceration. The surrounding parts are more or less swollen. The connective tissue of the pelvis is infiltrated with serous fluid, and is sometimes the seat of a dusky erythema, consisting of minute spots, disappearing on pressure and not elevated. In one case petechiæ as large as hempseed existed. These were not affected by pressure. The same patient later developed erysipelas.

In five cases ending fatally autopsies were made. The uterus was much enlarged, sometimes reaching almost to the umbilicus two weeks after labor. The cervix may be torn, showing diphtheritic patches or a thin gray film. In two cases, large portions of the cervix sloughed and the vagina became gangrenous. The tissue of the uterus is friable, and may be almost diffluent. The diphtheritic exudation may effect the fallopian tubes. In some cases, the muscular tissue of the uterus is scooped out as in dissecting typhus, of which I have described several cases. This occured in four of the cases of puerperal diphtheria. In one case, the mass thrown off was four inches long, two inches wide and one inch thick. These masses have a pear shape, their outer surface is of a gray color, and the inner surface flesh color. They are perforated with a number of holes leading into uterine sinuses. Under the microscope, these masses are shown to consist of smooth muscular fibre in a more or less advanced state of fatty degeneration. The connective tissue is increased. Lesions were also found in other organs and occasionally in the joints. Difficult labors and a previous weakened condition of the patient predispose to the development of the condition. The real cause of the disease is, however, an infection from the outside. I have never been able to convince myself that the poison passes from one patient to another, but it seems to be in the air of the ward. When a ward has been fumigated with sulphurous acid, there would not be a seriously sick patient for weeks. That the poison comes from the outside is also shown, by the fact, that when the prophylactic treatment to which I shall refer is adopted, the disease does not develop.

The first symptom which shows a deviation from a normal course, is usually the occurrence of fever, which mostly appears from two to four days after delivery. Sometimes there will be a chill or chilly feeling. The temperature rises gradually as a rule. It has ranged from 100.6° to 107°, the average being from 102° to 104°. Anorexia, vomiting, coated tongue and diarrhœa, witness the disturbance of the gastro-intestinal canal. The patient complains of pain in the epigastrium and one or both groins, sometimes extending into the legs. Examination shows the uterus larger than it should be, and quite tender. Tenderness is often also found in the groins and some swelling may also be observed. The lochial discharge is often scanty and offensive, but in some cases it has been normal. In those cases in which there was expulsion of the tissues of the uterus, there has been a purulent discharge until expulsion has been accomplished. The diphtheritic patch general appears from three to seven days after delivery It continues to spread for several days and usually stops in from three to eight days after the beginning of treatment. In one case the diphtheritic patches also appeared on the tongue, indicating that the disease is identical with the ordinary form of diphtheria attacking the throat. The irritation of the nervous system is evidenced by headache, stupor and delirium. There is alteration of the renal secretion, and sometimes there is painful micturition. Three patients had albuminuria. In two cases jaundice bore testimony to the perverted condition of the blood. The sweet breath and profuse sweats of septicæmia were

observed twice. One patient developed painful arthritis of the elbow joint. When the diphtheritic process was once arrested, the patients recovered rapidly. There is scarcely any difficulty in the diagnosis. When the injections of bichloride of mercury are employed, they cause a yellow discoloration of abraded surfaces. This is strictly limited to the abraded surface, and is unaccompanied with general symptoms. When the chloride of zinc is applied to the affected surface in the treatment of the disease, a slough is caused, having the color of the deposit and the physician is sometimes at a loss to determine whether or not the disease is spreading. The point is decided by noting where the application is made, and by observing the edge of the deposit. The diphtheritic deposit has a scalloped outline while the outline of the slough is smooth.

As to prognosis five out of twenty-nine cases died, giving a mortality of 17.2 per cent. Another of the cases might have survived, for she lived thirty-two days, and died from rupture of the uterus while an assistant was using an intra-uterine injection. The post-mortem showed the walls of the uterus to be extremly thin. The duration of the cases ending recovery, is usually about two weeks. In those cases in which a portion of the uterus is scooped out, the organ is left in a weakened condition, which in future pregnancies may predispose to rupture of the uterus.

In the way of prophylaxis, it is recommended to limit the vaginal examination during labor as much as possible. The finger or hand should not be introduced into the uterus unless absolutely necessary. The delivery should be so accomplished as to avoid as much as possible wounding of the genital canal. Instruments should be used with care. The most important element in the prophylaxis is the use of bichloride of mercury as an antiseptic. Everthing coming in contact with the patient should be washed in the solution of corrosive sublimate, one to two thousand. After this treatment was introduced only one case appeared in six months, and that was due to carelessness on the part of a resident, who delivered a woman immediately after removing a macerated fœtus from another patient. After the disease appears, the treatment must be energetic. The only treatment that has given me satisfaction, is that with chloride of zinc. The affected parts are touched with a solution consisting of equal parts of chloride of zinc and distilled water. This is rather painful and an anæsthetic may be used. A warm solution of corrosive sublimate, one to two thousand is used for intra-uterine injection where this is required, and subsequently a suppository of fifteen grains of iodoform is introduced. If this is done the process need not be repeated more than once in the twenty-four hours. The vagina is to be douched every three hours. The parts should be examined every day, and if the process is not arrested, the chloride of zinc is to be repeated. If the disease be limited to the vagina and vulva, the intra-uterine treatment is omitted. Extract of ergot is also given, with the hope of causing contraction of the uterus. Morphia, quinia and digitalis are used as indicated. High temperature is combated with sponge bathing, salicylic acid, and if necessary, the rubber coil and ice water. Carbolic acid is also given, sometimes combined with the compound tincture of iodine. If the temperature be not very high, warm poultices are preferred to the ice bag and coil. Where there is diarrhœa, warm poultices are also considered preferable.

Samples of the occlusion bandage to be used after labor, were exhibited. They consisted of a pad of absorbent cotton wet with the corrosive sublimate solution, over this a piece of oiled muslin or rubber cloth, and over all, a piece of absorbent cotton and a piece of muslin or flannel to attach it to the binder.

DR. WM. T. LUSK, of New York, said that ten years ago he had one hundred and fifty cases of this affection under his care. Of this number twenty-eight died. The epidemic could be traced to a patient brought into the hospital after a long labor. She was suffering at the time from syphilitic ulcers of the vulva, which was excessively inflamed. He delivered with forceps and the inflamed perineum tore. Soon after this the diphtheritic deposit appeared, and the whole ward was infected. The first cases were the result of transference from the patient, for the question of contagion was not recognized as it is now. After a time great care was taken to avoid every possible source of contact, but the disease continued, and could be only explained on the supposition that the air of the ward was filled with germs. In his first cases the treatment consisted in the application of equal parts of the solution of the persulphate of iron and compound tincture of iodine. The disease usually began with a certain amount of mildness, and gradually became more severe. Of the first twelve cases only two died, while in the second set of twelve cases only two recovered. In the progress of the epidemic the entire system seemed to be affected, even before the advent of labor. Since the adoption of Dr. Garrigue's suggestion with reference to the use of corrosive sublimate injections, he had not seen a case of puerperal diphtheria in the course of three and a half years. He had neither had a death from fever nor any cases of fever, the old-fashioned milk fever even being absent.

DR. H. P. C. WILSON, of Baltimore, remarked that he had always been adverse to using bandages of any kind after delivery, preferring to have the napkins placed under the patient so as not to obstruct the free flow of the discharge and to use frequent washing of the vagina with antiseptic solutions.

DR. RICHARDSON, of Boston, said that during the years 1882 and 1883 he had treated many cases of puerperal fever, but with ill success until the appearance of Dr. Garrigue's paper. After adopting the use of the pad and the corrosive sublimate solution for the hands of the attendants and nurses, the hospital has been almost entirely free from the disease. There had been no death since he adopted these measures, and there has been only one or two cases which had caused any anxiety. He agreed entirely with what the reader of the paper had said. He had found that even so weak a solution of corrosive sublimate as one to five thousand will sometimes cause salivation. Where this occurs he uses iodoform, as has been suggested.

Dr. Burns, of Brooklyn, inquired of Dr. Garrigues whether he had noticed any vaginal deformity following this affection? He had seen one case in which such deformity occurred. A lady, after her fifth confinement, was taken with tenderness, fever, and so on, and on the fourteenth day had a copious hæmorrhage. On examination, he found the entire posterior and outer surface of the vagina almost completely detached. Acetic acid was applied and the bleeding checked. An examination after the healing of the parts had taken place, showed the vagina much shortened and narrowed in its upper part, the cervix being obliterated. The anterior portion of the cervix was in contact with the recto-vaginal septum. He told the patient, in reply to her inquiry, that it was not likely that she would conceive. His prediction turned out to be false. In the following confinement, she was in labor twenty-four hours before there was the slightest appearance of an opening through which a fœtus could escape. There was bulging of the presenting portion of the uterus, and into this he made an incision and the child was delivered readily, the patient making a rapid recovery.

Dr. Garrigues thought that the endorsement of Drs. Lusk and Richardson would be sufficient to induce others to try the occlusion pads. During the year preceding the introduction of the new method of treatment, the mortality was nearly seven per cent. During the next, with the new method of treatment, the mortality was one and a half per cent. During the second year, it was less than three-fourths of one per cent. In the institution in which these observations were made there are a number of disturbing elements, one of the most important being its connection with a large general hospital. In this new method of treatment the antiseptics are applied only to the outside in normal cases. Only in abnormal cases are vaginal and intra-uterine injections employed. In reply to the objection of Dr. Wilson, he said that the pads used are absorbent. In hospital practice the pad is changed every four hours. In private practice, three times a day is sufficient. He had never seen salivation from the use of corrosive chloride. The nearest approach to it had been fœtid breath and diarrhœa. He had only seen two of the cases subsequently to recovery when in labor. In one there was great shortening and narrowing, but during pregnancy there was softening, and the labor was quite easy. The second patient is pregnant, and the vagina appears to be in good condition.

In reply to a question, the speaker stated that the use of the pads prevented all offensive odor.

(To be concluded.)

DOMESTIC CORRESPONDENCE

NEW YORK LETTER.

(FROM OUR OWN CORRESPONDENT.)

Dr. Jacobi's Address before the Academy of Medicine—Obscure Cases of Weak Heart—Death during an Epileptic Fit.

The address with which Dr. Jacobi, the President, greeted the Fellows of the Academy of Medicine when they reassembled for the first time after the summer vacation, on the evening of October 1, while very excellent in many respects, was marred by an expression of sentiment in regard to the "Code question," which was, to say the least, in very questionable taste, and which could not but prove offensive to a considerable portion of his hearers. Quite a large part of the address was devoted to a glorification of the action of the New York State Medical Society in repudiating the National Code, against which the adherents of the latter so long protested and so gallantly did battle, and just why such a firebrand should have been introduced, like a thunderclap out of a clear sky, at the very beginning of the scientific work of the Academy for another year, it is not a little difficult to understand. This body is made up of old and new Code men alike, but the action of the latter in the past has deprived it of the support of many of its former devoted friends; so that quite a number of those who used to be most active in its work, and who are by far the most liberal benefactors which it ever had, are now never seen within its walls. The unwise proceeding of Dr. Jacobi cannot but have the effect of still further alienating the adherents of the National Code, and thus proving directly prejudicial to the best interests of the Academy.

Having referred to the recent explanatory declaration of the American Medical Association in regard to certain clauses of the Code of Ethics at the New Orleans meeting, he went on to say: "The expressions of opinion in regard to the wholesome effect of the New Orleans declaration have been very numerous. I am in possession of several letters containing remarks full of satisfaction and hope. A gentleman well and deservedly known in the profession of both hemispheres, and markedly so with us for his allegiance to the Code of Ethics of the American Medical Association, gave enthusiastic expression to his delight over the satisfaction that declaration must give, and to the hope that the New York Academy of Medicine would give a public utterance in that direction. That would 'immediately settle all difficulty about the Code, and at once restore peace and harmony in the profession.' I had to tell him that the Academy of Medicine excluded all politics, ethical and otherwise, from its discussions, and that the only societies who could act in the matter were the medical societies of the county and of the State of New York. There the matter then rested, for I believe I was right in excluding it from any consideration in our midst." Yet in the face of this assertion, why in the name of common sense does he proceed to drag in the subject by the neck and ears? Apparently the only reason is that the "New Code" may flap its little freshly-fledged wings in jubilation over the "unexpected success on the part of the profession (?) of the State of New York in harmonizing a large majority of the medical men of the United States." "For the Medical Society of the State of New York," he says, "it must be a source of intense gratification to be convinced by the passing of that declaration, that a few years have been sufficient to so change

public opinion as to oblige even the American Medical Association to recognize the justness of most of the New York proceedings."

Dr. Jacobi maintains that the clause of the New Code which states that "members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine," is practically identical with the explanatory declaration passed at New Orleans, which he believes "endorses the New York Society and the spirit of the New Code;" but if he or any other of the New Code party will make the trial of seeking admission to the American Medical Association as a delegate, offering his allegiance to the New York Code as a substitute for subscription to that of the Association, he will find out that there is a *decided* difference between the two. The American Medical Association stands to-day where it has always stood. If black is the same as white, then the expression of the New York Code, "may meet in consultation," is the same as that of the explanatory declaration of New Orleans: "No circumstances can make it necessary or proper to enter into formal professional consultations with those who have voluntarily disconnected themselves from the regular medical profession." The cry of "humanity" was only the subterfuge under which the concocters of the "New Code" disguised their audacious schemes. Practically, the point has always been thoroughly well understood by the profession which has now been formally interpreted in the following words of the explanatory declaration: "*Resolved*, That there is no provision in the National Code of Medical Ethics in any way inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations cannot be correctly interpreted as interdicting, under any circumstances, the rendering of professional services whenever there is pressing or immediate need of them. On the contrary, to meet the emergencies caused by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code." If the New York Code and that of the Association, with this official interpretation, mean the same thing, why do not the New Code men renew their allegiance to the latter? Alas, it is not the "emergency-consultations" that they pine for, but those in cold blood which will enable them, particularly if they are specialists, to pocket a comfortable portion of the filthy lucre of the guileless homœopath's affluent patient. It may be true that the homœopaths of to-day are very different from those of forty years ago, and that they no longer believe in the principles laid down by Hahnemann; but if, as Dr. Jacobi says, "they now claim that their practice is not based on an exclusive dogma," why do they not drop the empty name, and call themselves simply physicians, in accordance with the broad, catholic spirit of the regular profession? Alas, here again comes in the question of the loaves and fishes! In every community there is a large class with more money than brains, who are never content unless they are being humbugged, and hence the name is retained simply as a device to secure trade. Truly a noble end in men of a learned profession! Let them discard an appellation which implies, at all events, an exclusive dogma, and the American Medical Association will be only too glad to extend to every one of them who is a properly educated physician the right hand of fellowship.

The first part of Dr. Jacobi's address, which was devoted to a consideration of the work of the Committee for Collective Investigation of Disease of the International Medical Congress of 1884, was in every way admirable; and he clearly set forth the difficulties to be encountered and the advantages to be gained in prosecuting labors of this kind.

The scientific paper of the evening, by Dr. R. Van Santvoord, which bore the title, "Obscure Cases of Weak Heart,'" was devoted to a plea, justified by the narration of several cases of interest, for a more careful study of cardiac weakness and its causes on the part of the general practitioner. The discussion which followed was participated in by Drs. E. Darwin Hudson, Andrew H. Smith, Leonard Weber, John P. Garrish and others. Before adjourning, a clinical thermometer formerly belonging to the late Dr. John W. Francis, of this city, sent by his son, Dr. Francis, of Newport, R. I., was presented to the Academy. It was stated that, so far as could be ascertained, the instrument was made about the year 1830, and Dr. Jacobi remarked that if this claim could be substantiated, Dr. Francis would be entitled to a priority in the use of the thermometer of which any one might well be proud.

A very curious accident recently caused the death of a young man in this city. He was subject to epileptic fits, and always slept with a chair backed up to his bed, to prevent his falling out in case of an attack. On Sunday night last he had a fit, and, falling out of bed, notwithstanding the presence of the chair, his chin struck upon its seat, and his body remaining in this position, he strangled to death before recovering consciousness. P. B. P.

New York, Oct. 2, 1885.

THE AXIS-TRACTION FORCEPS.—A CORRECTION.

TO THE EDITOR OF THE JOURNAL:

Dear Sir.—1. In an editorial which appeared in your JOURNAL of Sept. 26, under the title "Dr. Felsenreich's Modification of Alexander Simpson's Axis-Traction Forceps," you state that in my article, "An Obstetric Forceps," published in the September number of the *American Journal of Obstetrics*, my "allusion to the fact" that Dr. Felsenreich, of Vienna, had previously designed all the good qualities of the instrument therein described, "is disingenuous."

2. You further state that "Dr. Felsenreich's instrument is identical with the forceps described by Dr. Neale, with the exception of the thumb-screw," and that "Dr. Neale is entitled to the honor of substituting the compression thumb-screw at the ends of the handles, for the more useful contrivance of the Felsenreich and Alexander Simpson instrument," in

which the compression screw "is located on the middle third of the superior surface of the handles."

My reply is as follows:

1. I purposely refrained from attaching my name to the instrument in dispute. I did not call it Neale's forceps, but on the contrary I plainly stated in text, and demonstrated by diagrams, that it is "the practically unaltered Simpson forceps;" that Tarnier's "principle of axis-traction is the most important modification of the forceps that has been devised within the past quarter of a century," and that this axis-traction is applied to this forceps by means of the button-hole joint which "was first shown to me by Dr. Felsenreich, first assistant to Prof. Carl Braun, of the Vienna clinic, in 1882," and hence "the idea of the construction" of the forceps "is not *entirely* original with me."

2. I was and am of the opinion (which I grant may be erroneous) that Dr. Felsenreich attached the axis-traction rods to Braun's forceps, which is considerably different from the Sir J. Y. Simpson or the Alexander Simpson instrument; but be this as it may, the compression thumb-screw in the model of Dr. Felsenreich's forceps, I saw in Vienna, in 1882, was Braun's thumb-screw (the same as in Braun's craniоclast), attached to the ends of the handles, permanently effecting their shape, and in my humble opinion, their usefulness. If there be a later model of Dr. Felsenreich's forceps, of which I am ignorant, in which the thumb-screw, as you say, "is located on the middle third of the superior surface of the handles, as in the Alexander Simpson instrument" (originally in Tarnier's), I still maintain that even this arrangement permanently affects the shape of the handles and decidedly interferes with grasping them in the hand, as is done when the forceps is used as a simple Simpson, and not as a Tarnier. Indeed, this is the very practical objection my entirely detachable thumb-screw is designed to overcome, and it does it effectually.

3. I have also shortened the shoulder and made the last knob on the hard-rubber handles of the disputed forceps more prominent than in Braun's or Felsenreich's, or Alexander Simpson's, in order to afford a better purchase to the grasping hand, or a firmer grip.

4. I am of the opinion, not positive, however, that the cross-bar handle to the traction-rods of Dr. Felsenreich's instrument was attached after a method different from the Tarnier model, whereas I adopted this old style with certain slight yet practical alterations, to-wit: the movable metallic ring fixed to the handle is beveled, not flat, and fits into correspondingly beveled spring shoulders in the ends of the traction rods, which shoulders are two in number, and not one, as in Tarnier's forceps. These alterations, without in the least complicating the instrument, render it practically impossible to pull the handle off the rods (unless the springs are purposely compressed), which can not be said of the original Tarnier pattern.

5. There is also a fixation-bar concealed in the handle to the traction rods, which may be used at option to fix the swivel joint, thereby rendering the entire forceps rigid, when "rotation may be governed (so far as lies in the power of the operator with any instrument) without touching the handles of the introduced blades, or in any way interfering with their action as an indicating needle," Consider this an improvement or not, I have certainly never heard of or seen it in any other forceps.

The first blades I adopted were fashioned after the Sir J. Y. Simpson pattern after shortening the fenestrae and thickening the metal about the button-hole perforation. Fearing, however, that these blades might feather or slip, I quickly substituted the Alexander Simpson model, which is of altogether stronger build and greater cephalic and pelvic curves, and this is the only form of the disputed instrument now sold in this city. I was under the opinion, which I candidly acknowledge may be erroneous, that Dr. Felsenreich adopted Braun's blades, but whether he did or not it matters very little, for I believe Alexander Simpson was the first to attach Tarnier's traction rods to his own forceps, and hence to him is justly due the honor of this part of the modification.

1. The shape of the handles; 2. the neat compression thumb-screw entirely removable without altering in the least the shape or utility of the handles; 3. the firmer attachment of the handle to the traction rods; 4. the fixation bar concealed in that handle, to be used or not, at option, to aid rotation, are all that I claim. If concise nomenclature be desirable you may call it the Tarnier-Alexander Simpson-Felsenreich-Neale (?) forceps, but I would suggest the simpler name of "Combination Forceps."

Respectfully, L. E. NEALE, M.D.

Baltimore, October 2d, 1885.

[Dr. Neale admits that the forceps, described by him in the September number, current year, of the *American Journal of Obstetrics*, is merely a modification of Felsenreich's adaptation of Alexander Simpson's axis-traction forceps. He did not mention this fact, however, in the paper to which we have referred. We are of the opinion that this omission, to say the least, was disingenuous. We experience difficulty in believing that such an acute and attentive student, as Dr. Neale was in Vienna, could forget that Dr. Felsenreich substituted the button-hole for the hinge-joint in the Alexander Simpson instrument. Dr. Felsenreich repeatedly called the attention of all the gentlemen, who studied with him, to the characters of the modified instrument. The forceps, to which the axis-traction rods were attached, was the *Wiener Schulzange*, the original model of the Sir James Y. Simpson instrument. Carl Braun's forceps has been for years a practically obsolete instrument. It never attained to great popularity, and is not used in the Vienna lying-in clinics, except, on rare occasions, by the inventor himself.

Braun's forceps is simply the Sir James Y. Simpson instrument, with the fenestrae obliterated and completely covered with hard rubber. It would be difficult, if not impossible, to attach axis-traction rods to such an instrument.

As to the value of Dr. Neale's additions and modifications, opinions differ. In our judgment, where

these additions do not positively impair the usefulness of the instrument, they are utterly trivial.

Finally, we have entered into communication with Dr. Felsenreich on the subject of Dr. Neale's paper, and hope, within eight weeks, to publish his own comments. ED.]

ASSOCIATION ITEMS.

INFORMATION OF IMPORTANCE TO ALL MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—The notices which I send to members for payment of their annual dues bring to me so many inquiries as to the rules and customs of the Association, that I have deemed it advisable to call the attention of all your readers, as briefly as possible, to their responsibilities to the Association, viewed from my standpoint as Treasurer.

MEMBERSHIP.—Every one who attends an annual meeting of the Association as a delegate pays at that time five dollars, and thenceforward becomes a Permanent Member. He continues as such as long as he remains in good standing in the body from which he was originally sent as a delegate. As a Permanent Member, he must pay *Five Dollars Annually*, when notified by the Treasurer, whether he attends the meetings of the Association or not. Payment of annual dues entitles him to receive the weekly JOURNAL of the Association for one year.

MEMBERS BY APPLICATION are such as have not become Permanent Members in the manner above indicated, but apply to the Treasurer for membership, forwarding at the same time to him five dollars and the certificate of the President and Secretary of their State or local society, that they are in good standing in such society. They pay five dollars annually thereafter, when notified by the Treasurer. Members by application can join the Association at any time, and they receive regularly the weekly JOURNAL.

WHEN DUES ARE PAYABLE.—The annual dues from Permanent Members are payable to the Treasurer at the time of the annual meeting of the Association, or immediately thereafter. The payment entitles the member to receive the JOURNAL for one year from the following July. Payment for 1885, for example, entitles the member to the JOURNAL from July, 1885, to June, 1886, inclusive.

As some of the members have not yet forwarded to the Treasurer their dues for 1885, they are urgently requested to do so at an early day. Having entered upon another year of membership, they are morally and legally responsible to the Association for the payment of their annual dues, having already received for three months of the new year—1885—the JOURNAL of the Association.

SUBSCRIPTIONS TO THE JOURNAL, from those who are not members of the Association, should be forwarded to the office of publication, 65 Randolph Street, Chicago, and not to the Treasurer; but *all payments of annual dues must be forwarded to the Treasurer, Lock Box 1274, Philadelphia.*

DEATHS.—When a member of the Association, who is in regular receipt of the JOURNAL, dies, his family or other representatives are requested to inform the Treasurer at once of the fact.

PAYMENT OF DUES FOR PREVIOUS YEARS.—As a few members of the Association are still in arrears for payment of dues for 1883 and 1884, they are requested to forward at once to the Treasurer the amounts for which they are indebted to the Association.

TRANSACTIONS OF THE ASSOCIATION.—These annual volumes, thirty-three in number, to 1882 inclusive, may still be obtained, with few exceptions, from the Treasurer, at reduced prices. The Index to these volumes will be forwarded on receipt of *One Dollar*. An opportunity is thus afforded to complete sets of these valuable publications, or to obtain important papers and works which are daily becoming scarce.

Yours respectfully,

RICHARD J. DUNGLISON, M.D., *Treasurer*.

Sept. 25, 1885. Lock Box 1274, Philadelphia, Pa.

MISCELLANEOUS.

AMERICAN ACADEMY OF MEDICINE.—The next annual meeting of this organization will be held in New York City, commencing on October 28, 1885. Dr. A. L. Gihon, U. S. N., is President, and Dr. Richard J. Dunglison, of Philadelphia, Secretary.

DIED.—DR. JOHN L. ATLEE, of Lancaster, Penn., died at his residence on October 1, 1885, aged a little more than 85 years. Dr. Atlee was an ex-President of the American Medical Association, an eminent physician and surgeon, whose practice had extended over the unusual period of 65 years. He was not only eminent in the profession, but equally so as a citizen in all the relations of human society.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 3, 1885, TO OCTOBER 9, 1885.

Capt. J. H. Bartholf, Asst. Surgeon, ordered from Ft. Ringgold to Ft. McIntosh, Tex., for duty as post surgeon. (S. O. 125, Dept. Tex., Sept. 28, 1885.)

Capt. Daniel Weise, Asst. Surgeon, to be relieved from duty at Camp at Rock Springs, Wyo., and to return to his proper station, Fort Fred Steele, Wyo. (S. O. 99, Dept. Platte, Oct. 1, 1885.)

Capt. Victor Biart, Asst. Surgeon, sick leave of absence further extended six months, on surgeon's certificate of disability. (S. O. 227, A. G. O., Oct. 3, 1885.)

First Lieut. G. E. Bushnell, Asst. Surgeon, granted leave of absence for one month. (S. O. 215, Dept. East, Oct. 6, 1885.)

First Lieut. Wm. Stephenson, Asst. Surgeon, relieved from duty at Ft. Niobrara, Neb., and ordered for duty at Camp at Rock Springs, Wyo. (S. O. 99, Dept. Platte, Oct. 1, 1885.)

First Lieut. A. R. Chapin, Asst. Surgeon, leave of absence extended one month. (S. O. 230, A. G. O., Oct. 7, 1885.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING OCTOBER 10, 1885.

Bright, George A., Surgeon, to U. S. Str. "Brooklyn."

Fitts, Henry B., Asst. Surgeon, to Naval Hospital, New York.

Hall, John R., P. A. Surgeon, detached from Naval Hospital, Mare Island, Cal., and ordered to the "Hartford."

Swan, Robert, P. A. Surgeon, detached from Naval Hospital, New York, and ordered to the "Brooklyn."